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Notes and Items.

FOOLS HIMSELF WHO THINKS:

That others like him for his good clothes.
That he is entirely different from other people.
That his pretentions are transparent only to himself.
That because he claims a virtue it is credited to him.
That others never tire of hearing him talk of himself.
That brutal bluntness is mistaken for natural honesty.
That despising weak people proves one's own strength.
That anybody mistakes his laziness for wise deliberation.
That his vices are hidden behind a few lukewarm virtues.
That because he is a man his crimes are credited to bravery.
That all a woman's meanness is ascribed to helpless innocence.
That seven-eighths of all he does is not to support his own vanity.
That others will mistake his stubbornness for strength of character.
That his organism is so nearly unique as to require a distinct code.
That an occasional public gift glosses over an uncharitable life.
That hiring the most conspicuous pew makes it all right with the Lord.
That depreciating everything he sees or hears, proves his own superiority.
That his barbarous display is ascribed to the natural eccentricity of genius.
That arrogance to the lowly and cringing to the rich, is not despised by all.
That because others don't confront him with his baseness they are blind to it.
That his unhesitating condemnation of the crimes of others proves his own purity.—*Kate Field's Washington.*

IT is a well-established principle of economics that the young man who would get up with the sun should not stay up later than 10 o'clock with the daughter.—*Lancaster Times.*

The following fac-simile is a sample of hundreds of communications which we are continually receiving from the Medical Profession in regard to the value of *LACTO-PREPARATA* in Infant Feeding.

WE DO NOT SOLICIT TESTIMONIALS, NOR PUBLISH THEM WITHOUT PERMISSION.

Kansas City Mo. June 8th 91

Reed & Carnrick
New York

Gents

I have just received your samples of Lacto-Preparata. Would take pleasure in saying that it is no stranger to me. On the 4th inst: I reported to our Dist: Med. Society here two cases of very young infants who had Cholera-infantum produced mainly by their mother's milk being unfit. They were in the last stage of prostration In articulo-mortis nearly I put them on R. & C's Lacto-Preparata, and forbid any more mother's milk. They both recovered Speedily. I regard Lo-P- as the Sine qua non of all young baby food. I thank you for getting it up. Five years ago those Children would have gone where all have to go. Soon.

Very truly

B. F. Records M.D.

REED & CARNRICK, Manufacturing Chemists, New York.

The Times and Register.

Vol. XXIII, No. 19. NEW YORK AND PHILADELPHIA, NOVEMBER 7, 1891. Whole No. 687.

Clinical Lectures.

CATARRHAL DYSPEPSIA.

BY JAMES M. ANDERS, M.D.,
Professor of Theory and Practice of Medicine, Clinical Medicine and Hygiene at the Medico-Chirurgical College of Philadelphia.

THIS man, whom we have before us to-day, is twenty-six years old, and for the last two years has been a police officer. His father died from the effects of a gunshot wound. His mother is still living; she has dyspepsia, has also suffered from rheumatism and, of late, from eczema. The patient has always been well, except for slight colds, which have not been frequent. Two years ago he had la grippe, which laid him up for a week, but he made a good recovery. Fifteen months ago he was seized with belching of wind and sour eructations from the stomach, which condition rapidly grew worse and was accompanied, as a rule, with severe palpitation. This condition has continued until the present time. The patient started to drink spirits after entering his present occupation; frequently took a couple of drinks about 4 A. M. on an empty stomach. His bowels are habitually constipated; appetite fair. He is married, has three children, and for some months has had no desire for coition.

In addition to the symptoms enumerated, we find that he passed some mucus in his stools first, but not now; has also marked acidity (due to butyric and acetic acid fermentation); has lightness in the head and dizziness sometimes; has depression of spirits, and has lost twenty two pounds in weight.

Now when you get a history of this kind, always make a physical examination of your patient's stomach, to see whether there is any organic disease, or whether it is merely functional. Without such an examination you cannot make a diagnosis, as the subjective symptoms sometimes mislead you. On examination I find that he has little or no tenderness, no distension. We must examine as to one other point, the tongue. From the condition of that organ I would say that this man is suffering from a mild form of catarrhal trouble. Whenever you have a catarrhal condition of the stomach, or bowels, you are almost certain to have a tongue with enlarged papillæ, and red tip and edges, as you notice in this case. This man is constipated and bilious, as you see from his complexion. The fact that his mother has rheumatism; that he has been a drinker for fifteen months; the irregularity in his meals; acidity and distress after meals; gaseous eructations, and the constancy of his symptoms, would indicate the catarrhal form of dyspepsia. You remember I asked him whether he had these symptoms continuously from day to day, or whether they continued for a short time, and were followed by remissions or absence of symptoms. You will frequently find, in the atonic form, that the symptoms occur at intervals, and that they are never quite so continuous as in the catarrhal form.

The points, then, on which to base the diagnosis of the catarrhal form of dyspepsia are: The constancy of the symptoms, as against the irregular manifestations of the functional form. Then we have the tongue furred as a rule in catarrhal dyspepsia, with red tip edges and *enlarged papillæ*. We have in catarrhal dyspepsia a great deal of acidity. In functional dyspepsia you are more apt to have eructations of gas, along with brackish water, though sometimes there is also more or less acidity. In cases of catarrhal dyspepsia, we sometimes have a great deal of thirst. This is not always present, however. There is also a great deal of headache, and the general health and strength are more affected in the catarrhal than in the atonic form. The loss of strength goes on continually

without any remissions, during which the system may recover itself. As to the physical signs, you generally get pain on pressure in catarrhal dyspepsia. In the low forms of catarrh, however, this symptom is sometimes absent. In functional dyspepsia there is no pain on pressure. Bear in mind that in making a diagnosis of functional dyspepsia, you pay special attention to the etiology of the case. A history of exhaustive discharges, neurasthenia, worry, anæmia, mental taxation, etc., points toward this form.

The diagnosis in these cases is highly important, from the fact that the treatment is widely different. In the functional form you must build up the strength of the patient, build up the nervous muscular elements of the stomach, and assist gastric secretion. In the catarrhal form the treatment is entirely different. First, rid the alimentary canal of all undigested matter, of all secretions, and then give the stomach as much rest as possible. In order to do that we place the patient on milk or liquid diet for a couple of weeks. If the patient says milk does not agree with him, it may be pancreatinized or peptonized, or it may be boiled. These patients, when they suffer from thirst, should have diluents. The best thing to use for this purpose is some sort of gum water or mucilaginous drink.

I should be in favor of giving this man instructions to restrict himself to liquids, animal broths and boiled milk, every two or three hours regularly. He shall also have sub-nitrate of bismuth, gr. x, and bi-carbonate of soda, gr. v, to overcome the acidity, combining with this five grains of pepsin. This powder to be taken before meals. Another highly important thing in catarrhal dyspepsia is to keep the bowels soluble, and the best preparations for this purpose are the salines: Rochelle or Carlsbad salts, giving a heaping teaspoonful of either, preferably in warm water, early in the morning. Salines should always be taken fasting, early in the morning. If a teaspoonful is not sufficient to produce an evacuation in two hours, increase the dose.

SPINA BIFIDA:—ITS TREATMENT.

By ERNEST LAPLACE, M. D.,
Professor of Surgery, Clinical Surgery and Pathology at the Medico-Chirurgical College.

SPINA BIFIDA is an undeveloped condition of the spinous processes and lamina of certain vertebræ. This arrested development generally takes place about the lower dorsal or lumbar region. At first there is no tumor that would indicate the presence of the spina bifida. The fluid tumor, which characterizes this condition, only makes its appearance when the hydrostatic pressure, extending from the top of the brain to the seat of the imperfect vertebræ, has been brought to bear upon the spot within the meningeal cavity unprotected by bone; hence, a bulging, due to cerebro-spinal fluid, only protected from the external air by one layer of dura mater and the skin. At first it is a comparatively simple condition; that is, a pure meningocele; later on, as the cyst enlarges, the cauda equina, or spinal cord, becomes detached and a part of its thickness engages in the cyst. This is then called a meningo-myocele. When the totality of the cord engages in the cyst, comprising the gray matter and medullary canal, we have a syringo-myocele.

It follows from the nature of the condition, that, if unsupported, the tendency of the cyst is to enlarge, and decreasing the thickness of its walls, it eventually ruptures. The prognosis is thus always fatal if not relieved by operation.

There being no other alternative, it becomes of prime importance to consider the various modes of treatment, both palliative and radical. The results of treatment by later surgical methods, are much more encouraging than we have been led to suppose, and the following statistics will show that the strides of modern surgery will place the successful treatment of this sad condition among its newest achievments.

J. Morton, of London, reports 71 cases last year, in which he applied his treatment, which is about the same as what we would use in hydrocele for the purpose of exciting within it an inflammation.

He uses:

℞.—Iodi..... gr. x.
Potassii iodidi..... gr. xx.
Glycerine..... ℥j.

With a hypodermic syringe he draws out of the tumor ʒss. of its contents, and with another hypodermic syringe inserts into the tumor ʒss. of the above solution. Gradually a slight inflammation is excited in the sac, by which the walls are thickened and become stronger. These injections are repeated and the sac shrinks up in three or four weeks.

This method gives the following result: Of 71 cases operated upon, 35 recovered; of those that did not recover, 5 were simply not relieved; 4 were improved but never got well, and 27 died. Here let me say that the longer you defer treatment, the less are the chances of success. Now, of these 27 that died, the cause of death in 7 was meningitis. These might be eliminated, for with proper precautions meningitis could be prevented; 5 died of shock, that could not be avoided; 7 died of marasmus; these were probably run down before treatment was adopted. Hydrocephalus caused the death of 2 who already had hydrocephalic tendencies; 2 died of convulsions; 1 of diarrhœa, and the cause of death in 3 was doubtful. Therefore, you see that the treatment really is not so dangerous as it would seem.

Here is a summary of the other modes of treatment. Of 46 operated upon by simple aspiration, reported last February, 30 died. The next treatment was by ligation around the sac; of 16 so operated upon, 6 died. One that I operated upon three years ago by ligature got well; 23 were operated upon by excision of the tumor, and 7 died; simple injection of iodine was tried in 26 cases, of which 5 died.

We see that whatever be the irritating substance we inject, the chances are good, unless it travels upward and causes meningitis. As far as the danger of sepsis is concerned, we must say we are not clean when it occurs. So much for the so-called palliative treatment.

The man who seems to have met with the greatest success, is Robson, of London. He deals with these cases according to the methods of modern surgery as should be done in the case before us. Robson therefore excises the sac to a great extent, sews it up and approximates the muscles by buried sutures, thus giving a solid wall where before was a weak spot, and doing the same thing as in radical cure for hernia. Baird has operated on 20 such cases, with 16 recoveries, because he has applied the purest and best methods in surgery. Finally Zenenko, of Russia, operated on 30 cases, with 24 successes. These are the statistics up to date.

To-day we cannot rely on old statistics. If a man comes to me with statistics of twenty years ago, I'll none of them. We cannot compare an operation of

to-day to any operation on the same class of patients twenty-years ago.

I hope I have given you a more encouraging view of these cases than has been given by some others. When you realize the probability of death within six months on the one hand, and the fair chance of recovery after operation on the other hand, I hope you will see the advisability of operation.

The case now before you is a child six months old, in whom the mother discovered, a few days after its birth, a soft tumor over the lumbar region. This has gradually enlarged until it is now the size of an orange, translucent and covered with exceedingly thin skin. Our treatment will be that adopted by Robson. The child being anæsthetized, will be placed on its belly. We will make an incision, removing a part of the sac, then close the sac with buried sutures and sew the muscles of either side layer by layer, and finally approximate the skin.

This will be done with the strictest asepsis, and an aseptic dressing will be applied, to be removed only in eight days.

Original Articles.

TWO CASES OF FIBROID IN WHICH ELECTRICITY CEASED TO BE OF SERVICE, AND, IN FACT, WAS POSITIVELY INJURIOUS.[1]

By HERMAN D. HAYD, M.D., M.R.C.S.,
BUFFALO, N. Y.

MR. PRESIDENT AND GENTLEMEN: At medical society meetings one usually listens to papers devoted to the successes of various operative and therapeutical measures; but I propose to report to you two cases, interesting alike from a clinical as well as a therapeutic standpoint; cases in which the manifestations of well-directed treatment were at first eminently satisfactory and promised a brilliant result. But finally the symptoms, which were at first so speedily relieved, were, by each subsequent treatment, dangerously aggravated. And what may seem parodoxical remedies, at first utterly futile and worthless, prove to be beneficial and finally bring about encouraging results.

Mrs. L., aged forty-nine, referred to me by Dr. Starr, of Rochester. Had two children and six miscarriages; last pregnancy nine years ago; baby full term; no history of syphilis; large intra-mural fibroid filling up pelvis, immovable, with a smaller nodule posteriorly and inferiorly obliterating the linum of the rectum, and pushing the vaginal wall downward and forward. Outlines of mass were easily demonstrated by palpation, as the abdominal walls were thin and movable. Swelling extends three and one-half inches above the pubes. Pain and tenderness in iliac regions and over pubes upon pressure. Sound entered four and a half inches, curve posteriorly. Tissues firm, and resisting to deep pressure upon digital examination, with fullness and swelling in both broad ligaments.

History.—For several years menstrual periods have increased in amount, but for the past two years, and particularly for the last nine months, the flow has been excessive. Attacks of hemorrhages—continuous, lasting for days and even weeks—have occurred from time to time, and, on one occasion, the patient remained in bed for two months. She used various medicines and had numerous local applications by her physicians; applied ice in the vagina and over the lower abdominal regions. Bowels of late very constipated; in fact, a natural movement has been impossible for months, and even an enema brings little or no return. Locomotion much impeded on account of the resulting pains in the left hip and side, and extending into the back. Bladder symptoms very annoying and often of distressing urgency. I was called to see the patient in January, 1891, and found her in bed, where she had been for eighteen days, flowing considerably, with all the symptoms of anemia well marked, and the physical prostration very great. Upon examination a large mass was felt filling up the pelvis. It was fixed, and the vaginal canal was much shortened and pushed forward by a second and more dependent nodule. A rectal examination was made, and with difficulty the finger was pushed above the obstruction, when the bowel was found to be very much dilated and distended with hardened fæces. An injection of sweet oil and glycerine was given, and subsequently soap and water, and with the aid of the finger, and with much effort and pain on the part of the patient, a most prodigious evacuation resulted. A vaginal injection, corrosive sublimate 1–3,000 was given, after which positive intra-uterine galvanism administered, 60 m. a. for seven minutes. The hemorrhage, which was considerable before the treatment, was at once controlled. The galvanic application was again made in three days, when it was found that the hemorrhage had practically ceased. The patient was very sensitive to electricity, and complained a good deal with each treatment, yet not sufficient to make me anticipate any possible complication. These treatments were continued every third day for a month, when the patient was enabled to come to my office. After three months' treatment a very appreciable diminution in the size of the tumor had taken place, especially in the smaller mass, which had practically disappeared; at all events it offered no obstruction to the rectum. The bowels were moving naturally; there was no bladder precipitancy; the pains on locomotion had passed away, and the general physical condition excellent, with a gain of twenty-seven pounds (95—124 pounds avoirdupois.) A large accumulation of fat had taken place, especially where the pad had been placed. The menses appeared with regularity, and after the first period, which was excessive as well as painful, the loss was normal in amount. After four months' regular bi-weekly treatments, and once a week for another month, averaging from 60 to 75 m.a. for seven to ten minutes, it was thought that the treatments might be discontinued, but the patient was to return occasionally for observation. To my surprise she returned at once, complaining of a little hemorrhage after the last treatment, and slight pain. Upon examination no tenderness was evident, and no reason could be given for this untoward and unexpected complication. Another positive intra-uterine application was given with great care, and the patient invited to return in three days. Hemorrhage, but increased in amount, was again complained of. The patient was directed to go home, get to her bed, and then I should try another treatment. But to my surprise the hemorrhage was again aggravated, and continued quite copiously for three days. What was to be done, and what was responsible for this condition, were two questions which were seriously presented to my mind. Was

[1] Read before the American Electro-Therapeutic Society, at Philadelphia.

the endometrium, even after such a long course of treatment, at fault by reason of excessive granulation? If so, the os was to be dilated at once and the uterus thoroughly curetted. Or did the uterus and ovaries rebel against the irritative influence of the long-continued galvanic current, and thus keep up the flow? I thought this a possible explanation, and forthwith swabbed the womb with liq. ferri perchlor., and administered pot. brom., grs. xxx every fourth hour, with the happy effect of completely arresting all hemorrhage after a few applications, which satisfactory condition has continued for three months; and in the meantime the periods have come with regularity and have caused no trouble.

Bridget M., aged forty-eight; single; seamstress; referred to me by Dr. Mackey, of Buffalo. Intramural fibroid size of orange; womb movable, but restricted by slight adhesions on right side and posteriorly; tissues soft and relaxed; sound entered four inches. Patient had been flowing for five weeks, and for the last ten days was compelled to take to her bed, and using, while in the recumbent position, eight to ten napkins a day. General condition that of extreme weakness with dizziness, headache, palpitation, etc. A sublimate injection was given, and then positive intra-uterine galvanism, 75 m. a., for seven minutes. The hemorrhage had practically ceased at my next visit, on the following day. On the third day another application was made, and so on bi-weekly, with the most satisfactory expectations. Patient at once increased in flesh and strength, and in the course of a few weeks came to my office for treatment. The next period came in five weeks, and lasted for two days. No other menstrual period came for three months, making me anticipate an artificial menopause. The patient showed great tolerance for the electrical current, and complained but very little, even with 125 m. a.; consequently from 100 to 125 m. a. were invariably given. All went well and treatments were discontinued; after the fourth month the womb had reduced one-third in size and all evidences of trouble were at rest. One day, while lifting a heavy carpet, the patient felt something give way, and soon noticed a little blood, and presented herself at once for treatment. Positive galvanism 75 m. a., with great care, was given, and, like in the previous case, it provoked the bleeding. On the third day the patient returned and another treatment was given, and the vagina was thoroughly tamponed with cotton sprinkled with iodoform. The hemorrhage was aggravated, and continued to be provoked after each treatment, until finally the electricity was abandoned, and the womb was thoroughly swabbed with tinct. iodine (Churchill), and immediately the hemorrhage stopped, and it has ceases to be a feature in the case for the past four months. The condition of the patient is excellent.

These two cases are interesting in that they show how quickly dangerous, and perhaps fatal, hemorrhages were controlled by positive galvanism after many other forms of treatment had been conscientiously tried. Moreover, they suggest to our minds the possibility of electrical satiety, in which a condition is brought about where, after long and continuous electrical applications, symptoms at first relieved were provoked and aggravated by its subsequent employment. Whether this is done by tiring out reflex muscular contractile powers, or by ceasing to provoke a permanent eschar on account of certain degenerative changes in the tissues previously influenced by this agent, or by irritating the ovaries, or even by pre-existing adhesions, as suggested by Coe, as perhaps a cause of obscure hemorrhage, is difficult to answer. They are also interesting in that they present a certain condition of tissues, perhaps brought about by electrical stimulation and decomposition, which enable simple measures to act favorably, when previously they had no salutary influence. Moreover, they impress upon the surgeon's mind the necessity of an expectant treatment in women at this menopause in life, and a frequent recourse to various remedies, which may at one time fail, but after a certain period and after the influence of other treatments, be of signal service.

Let me conclude by saying that these two cases are two out of a series of eleven cases of fibroid tumor in which the others were satisfactorily treated by the Apostoli method.

78 NIAGARA STREET.

THE USE OF THE GASTRIC ELECTRODE IN DIMINISHED PERISTALSIS.[1]

BY CHAS. G. STOCKTON, M.D.,
BUFFALO, N. Y.

MY thanks are due your President for the opportunity of presenting before the American Electro-Therapeutic Association this brief paper on The Use of the Gastric Electrode in Diminishing Peristalsis, a subject which has interested me deeply for several years.

The attempt will not be made to point out the various fields of usefulness for the electrodes in gastric diseases. This has come to be too long a story, and although, as might be expected, experience has, to some extent, modified my views, there can be no doubt that in the majority of cases of indigestion, attended with weakened motility of the stomach, the direct electrical current is of decided benefit.

In the fall of 1887 I began the practice of this method of treatment; and, in order to escape the disturbance created by the direct application of the metal electrode to the gastric mucous membrane, I endeavored to protect the stomach by conveying the current through the ordinary stomach tube.

At first an alkaline solution was used in the tube, and by this the column of fluid was made the conducting medium. A weak current was, in this way, transmitted; but the experience proved unsatisfactory.

A tube was next prepared by running through its entire length a copper wire, which conveyed the current to the stomach, which organ was partially filled with an alkaline solution. In this way I was able to carry a current of sufficient strenght for any purpose; but the tube, encumbered by the wire, was not easy of introduction, and necessitated too many introductions at one sitting; for the reasons, that I found it necessary to begin and end with an empty stomach, which, in practice, meant the use of the simple tube for lavage, the electrode tube for the current, and again the simple tube for the final emptying of the stomach. This frequent introduction of the tubes at one sitting led to the creation of the contrivance which I have employed ever since, and which, to my mind, better answers the purposes than any instrument within my acquaintance.

It consists of an ordinary stomach tube, twenty-eight inches long, with two openings made near the distal extremity. At the proximal extremity it is fitted with a hollow steel coupling, which, attached to three feet of rubber tubing, makes a continuous

[1] Read before the American Electro-Therapeutic Society, at Philadelphia.

syphon about five feet in length. With this the stomach is emptied, and without removing the instrument from the stomach; the tube is disconnected at the coupling, and a spiral wire, also twenty-eight inches long, is introduced into the tube, and the coupling closed by a polished steel plug at the proximal extremity. In this way the current is conveyed to the stomach admirably, and the gastric mucous membrane is unable to touch the electrode, owing to the rubber covering, save at the fanestræ on either side.

After the application of the current, the electrode is removed, the rubber tubing again coupled on, and the contents withdrawn for study, with but a single introduction and removal of the tube, which resulted, not only in the economy of time to the operator, but also in the saving of no little discomfort to the subject.

Having shown that direct gastric electrization is easily accomplished, the usefulness of the method now remains to be discussed.

For the purposes of study, my institution cases, owing to various interruptions in the treatment, are unsatisfactory. I have, however, the complete records of a series of forty cases, treated in my office during 1891, which show better results and more positive conclusions than do the records of former years.

This includes cases:

1. Where the motility of the stomach has been simply weakened, as well as those in which it is apparently absent.
2. Those attended with dilatation.
3. Those accompanied with gastric catarrh, atrophy of the gastric mucous membrane, and some in which the hydrochloric acid existed in excess.

We are only now coming to appreciate the importance of weakened motility of the stomach walls as a disturbing factor in the processes of digestion. True, we have occasionally to deal with cases in which there is too great motor activity, and others in which the movement is irregular, either as to manner or time; but these are less troublesome, if not less frequent, than the condition of weakened motility. With weak and slow movements there is delayed absorption; fermentation is induced; the chemistry of the stomach disturbed, and toxæmia of gastric origin, giving rise to many of the symptoms which we have been in the habit of calling lithæmic, is the natural result.

In the treatment of these cases, it is best to restrict the diet to those substances which, upon examining the stomach contents, are found most readily digested. The current should be applied after lavage, and the faradic current is that which is usually more satisfactory, and which must be applied in sufficient strength to produce, not merely the contraction of the abdominal muscles, but sufficient to induce movements of the stomach itself; which can be determined by palpation over the epigastrium, and sometimes by the forcible expulsion of fluid from the unclosed tube. A current of this strength is easily borne by the patient; provided a large sponge electrode be applied over the back or over the abdomen. It is, however, strong enough to give pain to the patient if made to pass, by accident, through the hand or face.

The sittings should continue from five to fifteen minutes, usually beginning with five minute séances, and increasing the duration until the limit of endurance is reached, as shown by an excessive secretion of mucus, a disturbance of digestion, or a feeling of lassitude or pain on the part of the patient.

Having reached this, the proper dosage can readily be estimated. The treatment must be continued, in some instances for a prolonged time, in other cases relief follows a few applications.

I can well understand how disappointment to physician and patient would ensue after the persistent use of this method for several weeks without marked benefit, but in a few cases, after months of patient effort, success has at length come, and I have now no hesitation in applying electricity at intervals, for six months, if necessary, to establish a satisfactory peristalsis, without which some patients can not be well.

In the case numbered "4" in this series, the patient was a neurotic woman whose digestion seemed perfect, with the exception of delayed emptying of the stomach.

Under a prolonged treatment by diet and electricity she was better and worse from time to time for three months before a decided improvement occurred. At length the stomach showed the ability to empty itself at the proper time, and absorption from the stomach also became more active. From this time onward there was slow and steady improvement. It was nearly eight months before the patient was discharged well, a result which, I think, was mostly owing to electricity, for when this treatment was discontinued, and lavage, diet and medication alone employed, she steadily lost ground which was regained upon the re-establishment of faradization.

Not so discouragingly long is the case No. 23, that of a young woman, twenty-eight years old, who had for several years suffered from intense headaches; her blood was 20 per cent. deficient in hæmoglobin; her complexion muddy; her tongue coated, bowels constipated; her sleep was disturbed, and she was intensely nervous, with complete loss of appetite; indeed, she said she had not been hungry more than once or twice during the past several months. She made no complaint about her stomach, except that occasionally she would have a headache more intense than others, at which time she would vomit, and after which attacks she felt relieved of her symptoms.

After subjecting her to various forms of treatment, I turned the case over to my associate, Dr. Allen Jones, for further study. The doctor at once turned his attention to the stomach, and discovered that there was almost complete loss of peristalsis, the food remaining indefinitely, and undergoing fermentations which, doubtless, gave rise to the toxæmia and the other symptoms. After lavage she felt relief for a few hours, but her symptoms very soon returned and no positive improvement occurred until the use of the direct electrical current, after which she made rapid progress, considering the long duration of her illness.

The patient recognized the importance of the treatment, and asked for its renewal when it was temporarily discontinued. After two months the case was discharged well, and yet this young lady had been dosed with iron and various other reconstructives for years without the slightest benefit.

As soon as her stomach regained its motility the evidences of toxæmia disappeared, that is to say, she had a good complexion with clear skin, and was without headache, nervousness and sleeplessness; her bowels became regular and she regained her strength. From day to day it was observed that less food was present, less fermentation, the absorption improving as there was evidence of increased motility.

In some cases the greatest benefit appeared to follow after half a dozen sittings.

In No. 20 we have a case in which the treatment had to be discontinued because of the debility which appeared to follow the use of even a moderate current.

The patient was a neurasthenic, single woman, forty years old, who had suffered for years from mental pain and neuralgia, weak heart, disturbed sleep, and the usual symptoms belonging to her class. Her digestion was in every way atrocious, and remained rebellious to every form of treatment which I applied. Perhaps nothing which I did seemed to disturb her more than electricity.

I must not spend too much time on this part of my subject, but before leaving it let me say that in a few instances I have found greater benefit from the application of the continuous current, with occasional interruptions, than by the faradic current which one would naturally apply.

Let us pass on to the discussion of electricity in the treatment of poor motility associated with dilatation of the stomach. There is no question about the importance of the measure here. In fact, I can conceive of no way of relief to the sufferers from gastrectasia save by electricity and massage. The faradic current is usually the more satisfactory, and under it there will be found moderate improvement appearing after a comparatively short time; but a great improvement is not usually obtained until months of almost daily stimulation to the gastric musculature enables the stomach to maintain its position, keep to its normal size and empty itself properly.

Twenty-one in this series of forty cases showed greater or less dilatation, as demonstrated by accurate measure. Of this number, twelve showed dilatation of an extreme degree. Some are still under treatment, but five are discharged as cured; all have been greatly benefited, and a number have regained to such an extent that absorption takes place properly, and the stomach is emptied quite uniformly five or six hours after an ordinary meal. This may not impress you as being a remarkable record, but when you consider that the twelve cases were all severe ones; that they have all been benefited; that some have been cured; that others of them are nearly well, I think it will be considered a triumph as compared with any other course of treatment hitherto suggested for the relief of this persistent and very serious condition.

I can only allude to that class of cases in which the stomach movements are diminished, and which cases are associated with gastric catarrh, gastric atrophy or excessive secretion of hydrochloric acid. These complications (if they may be so called), often interfere with the regular course of electrical treatment, and each case must be studied by itself.

The cases in which there is marked gastric catarrh do best under the continuous current. The anode is applied within, the cathode, with a large sponge electrode, applied over the back, and a dosage, ranging from eight to fifteen milliamperes, generally employed.

With the current occasionally interrupted as before described, the dilatation may be relieved, and, not infrequently, the catarrh also improved. In instances of atrophy of the mucous membrane either current may be employed. The continuous current is useful here because it is more potent in stimulating the secretion of hydrochloric acid than the faradic.

Occasionally an excess of hydrochloric acid interferes with the electrical treatment. This, however, is very unusual, and generally then but temporary.

It, in my opinion, should be a rule that the treatment in ordinary instances should be applied at bedtime, and the stomach left empty and at rest during the night. This plan, however, will prove impracticable when there is great excess of hydrochloric acid, for this so disturbs the empty stomach during the long hours of the night that the patient not infrequently loses sleep, or wakens in the morning feeling miserably.

These are among the most important points as regards exceptional cases.

These remarks may suffice to give a general idea of this method of treatment, and although I feel tempted to speak with greater particularity, such a course might prove tedious to the hearers.

In closing, it may be well to affirm that in nearly every case of weakened gastric motility, electricity by direct application is of the utmost importance.

The exceptional cases are those which are associated with malignant disease, a few rare cases accompanied by gastric ulcer and weakened motility occurring in some instances of general neurasthenia, in which electricity, no matter how or where applied, is resented by the patient.

It is necessary, in order to obtain success, for one to study carefully his cases as regards diet and avoid over-taxing the digestive strength of the individual. Over-feeding, under-feeding, or the taking of improperly prepared foods, are not infrequently as powerful obstacles to success as the taking of foods unfitted to the given case.

436 FRANKLIN STREET.

THE ACTION AND APPLICATION OF THE FARADIC CURRENT IN GYNECOLOGY.[1]

BY AUGUSTIN H. GOELET, M.D.,
NEW YORK.

THIS paper is presented with the desire that a scientific discussion will be indulged in, and more light will be thrown upon a subject heretofore clouded in much uncertainty and obscurity, to the ultimate benefit of all of us who are interested in the therapeutic uses of electricity. The therapeutic action of the faradic current and its application in gynecology is, to my mind, one of the greatest problems of to-day in medicine. The galvanic current and its capabilities are fairly well understood by those who have taken the trouble to study the subject. But with the other, unfortunately, medical literature is in such a chaotic state in regard to it, that a study of the subject is more apt to bring confusion than enlightenment. One author will declare that it has no action, and that any apparent effect must be purely psychical; while another will exalt its efficiency in the highest terms; one will declare that there is a marked difference between the action of the primary and secondary currents, and even in the current from a different arrangement of secondary coils; while another will deny this distinction, and declare in favor of one secondary coil for all purposes. To one who has had practical clinical experiences with properly constructed apparatus, this appears unwarranted as well as unfortunate. Unfortunate because the faradic current is a therapeutic agent of too much value to be neglected and discarded; and unwarranted because those who have disputed its action have done so without due regard for the chances of failure and uncertainty afforded by imperfectly constructed apparatus.

This leads us to a consideration of the construction of apparatus. Upon investigation it has been discovered that, heretofore, makers have had no guide or standard for the construction of faradic coils, and the length and the size of the wire forming the secondary coil was more a matter of convenience than regard for any physiological effect of the current to be

[1] Read at the first annual meeting of the American Electro-Therapeutic Association, September 24, 1891.

derived therefrom. In consequence these coils will be found to vary from No. 15 to No. 30 wire, and from 60 feet to 200 yards in length. The lower numbers (coarser wire) will be found more often upon the coils of faradic apparatus, because cheaper and more easily handled with less breakage. It is unusual even to-day to find a secondary coil composed of wire smaller than Nos. 22 or 26, and longer than 100 to 200 yards, and the majority are made of Nos. 18 or 20 wire, about 200 feet long. The Engleman battery, with three different secondary coils arranged after the plan of one described in Watteville's work, made by Gaiffe, of Paris, is a decided advance in this direction, and is the only reliable and satisfactory apparatus suitable for gynecological work manufactured in this country. The coarse wire coil is of No. 16 wire, about 75 yards long; the intermediate is of No. 22 wire, about 225 yards long; and the fine wire coil is of No. 32 wire, about 660 yards long.[1] I am led to make this statement because, through correspondence with the different manufacturers, the construction of their coils has been definitely ascertained, according to their own statement. This information is not, however, to be relied upon as absolutely accurate, since the workmen are allowed much latitude, and will often suit their own convenience, using a finer or coarser wire of almost any length regardless of the effect it may produce. The whole subject has been looked upon as such a matter of indifference by physicians who use the apparatus that this laxity is not surprising. I would advise any one who desires to be accurate to ascertain definitely the size of the wire composing his secondary coil, then measure the resistance and calculate the length for himself. The author has done this in several instances, and found the claim made by the manufacturer to be erroneous. With such variation in the construction of apparatus scattered throughout the country, is it to be wondered that uniformity of action is not obtained by different experimenters of this agent? Experience leads me to make the statement that faradic batteries of ordinary construction are not suitable for gynecological work, and satisfactory results must not be expected from their use.

Another serious fault to be found with the construction of the ordinary faradic battery is in the vibrator, or current breaker. Most makers appear to have in view a desire to secure an easy adjustment, and to have it make as much noise as possible, and if it will produce a harsh, rasping sound, to be heard all over the house, it is perfect in their mind. Nor is this fault confined to cheap batteries. The vibrators of otherwise finely made instruments are often constructed upon this faulty principle. A perfect vibrator is a difficult thing to secure, and requires care and time for its proper adjustment. Every apparatus should either have two, for coarse and fine vibrations or else the device should be capable of furnishing both coarse and fine interruptions. And by fine interruptions is meant that they should reach the maximum of rapidity attainable; not fifty or eighty per second, but one hundred and fifty to two hundred. By coarse vibrations is meant from fifty to one hundred per second, and they are to be distinguished from slow vibrations of one to four per second.

Since the primary current is not used for gynecological work, the construction of the primary coil may be left to the instrument maker, who will use fairly coarse wire of moderate length to get the most work out of the cell or cells operating the battery, though unquestionably it should be proportioned to the secondary coil to be used with it, and the core should be of liberal size. It is the secondary coil on which we rely for effective work and useful results, and too much depends upon the proper construction of the coil from which it is derived to have it treated as a matter of indifference. I am well aware that the difference of effect of differently constructed coils has been questioned, even denied, by otherwise well posted medical electricians; but I am so well satisfied with the correctness of my previous statements upon this point that I reiterate them positively, believing, that in time, they will be admitted without dispute. Those who have disputed this point have done so without taking into consideration the little resistance encountered in the bipolar method where both terminals are applied to the vagina or within the uterus, by means of bare metallic electrodes separated not more than an inch or two. Lay aside the application of this current to the outside of the body where high resistance is encountered, and consider its application with both poles applied to a mucous surface like the vagina, where the resistance is low, it will not take long to demonstrate satisfactorily that there is a decided difference in the action and effect of the current from the long, fine wire and the short coarse wire secondary coils. The former will not only be bearable but rapidly sedative, and not at all painful; while the later will be painful and unbearable applied in the same manner. Do not stop here, but use first the current from the finest Engleman coil (composed of 32 wire about 660 yards long), then use the current from his intermediate coil (composed of No. 22 wire and only a little over 200 yards long) and note the difference. The former will be nothing while the latter will be irritating and painful. If the intermediate is used first and the other afterward, the action of the fine coil will be scarcely perceptible to the patient. But one need not use the current on a mucous surface in this way to be convinced, though the difference is more noticeable there. Let him grasp the bipolar electrode in the hand, so both metallic surfaces will be included, and try the effect of the current from the Engleman coils. A decided difference can be detected by increasing the current from each coil to the point of greatest tolerance. Not only will a difference in the character be perceived, but the current from the finest coil can be endured for a longer time than that from the intermediate, and at the end of a given time its action will be less perceptible, showing the sedative character of the current. The current from the coarse wire will be painful and quite unbearable, even for a moment. It will be admitted that the current from a coil composed of fine wire of great length, has an increased electro-motive force, though its volume is cut down by the resistance in the coil, and it is, therefore, more capable of overcoming external resistances. This is demonstrated by the fact that this current can be made to produce a spark that will jump through several inches of space. It is done by using a coil of fine wire of great length. No such phenomenon will be observed when the coil is composed of coarse wire of moderate length. This shows that the current from the two coils are possessed of different physical qualities, and it is but natural to believe them capable of producing different physiological effects. That, under adverse circumstances, the dissimilarity of effect is not so pronounced, will be admitted, but the fact remains unaltered and beyond dispute. The current from the

[1] The numbers used refer to the Brown & Sharpe's American gauge.

long fine wire is one of intensity, that from the short coarse wire is a current of volume; and it is this difference of quality which allows the manifest difference in their physiological effect.

Not only is there a difference in this current, as derived from a long fine wire and a short coarse wire, but there is a notable difference in the current from different lengths of the same size wire, and for the same reason. In the current from a long fine wire you have an increased voltage with less amperage, while in the current from the coarse wire you have more amperage and less voltage. In other words, the former is a current of greater electro motive force, and the latter one of greater current strength with little electro motive power. The difference is, therefore, purely one of electro-motive force and volume. That with greater electro-motive force is a current more capable of overcoming resistance, while the other, though possessed of more volume, has less power to overcome resistance, because endowed with less electro-motive force.

The current from the fine wire secondary coil has its electro motive force increased because of the increased length of the wire, allowing more convolution to be exposed to the inductive influence of the primary, and it stands to reason that the electro-motive force is diminished if the length of the wire is lessened, since the inductive influence is decreased. The result is not the same if the current is transmitted through the whole length of the fine wire, and only half of it is exposed to the inductive influence of the primary, for it still has the great length of the fine wire to traverse with its resistance interposed, which it would not have in the shorter length of wire, and it has but half the inductive influence of the primary. Take for example a coil of fine wire of 1,000 yards, and one of 500 yards. No one will deny the fact that the former will give more resistance than the latter. With the former exposed for half the length to the influence of the primary, half of this influence is lost, and with it half of the power exerted by the generating cell, and the current has to encounter the resistance in the whole length of the 1,000 yards of wire. With the 500 yards coil exposed to the full influence of the primary, the full inductive influence is secured and none of the battery power is lost, while the current has less resistance to encounter in traversing only 500 yards of wire, than if it was compelled to traverse the whole distance of 1,000 yards. This ought to be clear to any one, and, if so, the difference of result must be appreciated and admitted.

If any one doubts the fact that these currents, from different size and length of wire, have different volume under the same condition of external resistance, let him try the experiment of placing a milliampere meter in the circuit of each one separately, and make and break the current slowly by moving the vibrator with the finger, or by means of the single contact key. The deflection of the needle produced by the coarse wire coil will be very noticeable, while with the fine wire coil it will be so slight as to be scarcely recognized.

It is not intended to convey the impression that these currents from the different coils are to be used in the same manner and with the same rapidity of interruptions; for the action of the current depends much upon the interruptions being proportioned to the coil and the effect intended.

I am satisfied that a faradic battery, to meet all requirements, should have not two but four or five secondary coils to secure the variation of effect of which this current is capable. With this view in mind I have had five coils made for my cabinet battery. Besides the Engleman coils, one is of No. 36 wire 1,000 yards long, and another of the same wire 500 yards in length. By this means we will be able to treat very sensitive conditions of the pelvic organs, which could not be approached with the usual coils. The longest coil of finest wire is used first, and when that has sufficiently anæsthetized the parts the next is employed. Sometimes this may be done at one sitting, and two coils used successively; in other cases it will take several sittings to overcome the sensitiveness sufficiently to allow the current from a shorter wire to be employed. My experience leads me to conclude that the Engleman coils, though a great improvement upon the others, do not wholly meet the requirements of gynecological work, and I would suggest for the finest coil a No. 36 wire 1,500 yards in length. This tapped at 1,000 yards gives in addition two other coils, one of 1,000 and one of 500 yards in length. Then another coil of No. 32 wire 800 yards long, tapped at 500 yards, would give a coil of that length, and also one of 300 yards, giving in this coil three different lengths; another of No. 22 wire 250 yards long, to correspond with Engleman's intermediate. Then a coarse wire coil of No. 16 wire 100 yards long. By this arrangement with four spools we get practically eight different coils, and a corresponding variation in the current with the addition to the apparatus of but one spool.

There are several points of importance in connection with the use of the faradic current which have not been sufficiently emphasized, and are, therefore, not appreciated. One is, that in using the secondary coil of fine wire for its sedative effect, the interruption should reach the maximum of rapidity, and that they should be perfectly smooth and even without jerk or shock. It must, also, be borne in mind that the intensity of the current must be increased very gradually, so gradually in some conditions as to be scarcely perceptible to the patient, and the decrease must be in the same manner. The current should never be turned on or off suddenly. Besides the irritant effect upon the diseased structures under consideration, it is decidedly unpleasant to the patient.

Another point often overlooked in using the current from the short, coarse wire coil for stimulation of the muscles is, that the interruptions should be slow, and in marked contrast with the fine interruptions to be used with the current from the fine wire coil for sedation.

There is a reason for this. In effecting sedation it is desired to paralyze the sensory nerves and to relax and wear out the muscles, thus relieving the painful contractions. When the interruptions are rapid, and the muscles are unable to respond to every vibration, and a constant contraction or a tetanoid condition is produced, which eventually wears out their contractile power, and there is consequently a condition of relaxation brought about if the application is continued long enough. The same constant and intense stimulation of the sensory nerves results in a temporary loss of their power to respond, and, in consequence, a condition of anæsthesia is produced more or less prolonged, depending upon the duration and frequency of the application. With the current from the short, coarse wire, we desire to produce a stimulation of the muscles, and alternate contraction and relaxation, which will resemble the normal physiological action, and the interruptions must be slow, so as to allow the muscles time to recover and again respond in a normal manner. In other words a sufficient time must be allowed between the interruptions

to permit the molecular changes to take place. If the exitation of the motor nerve is rapid, a tetanic contraction of the muscles is produced, during which relaxation does not occur. Slow interruptions permit distinct contraction and relaxation to take place, and the normal physiological action is closely imitated.

We get another effect of great value from the stimulation of current from the long fine wire coil. I refer to its effect upon the vaso motor nerves and the capillary circulation. The stimulus exerted by the current produces contraction of the vessels and an increase of the vermicular movement, which quickens the circulation. This hastens the absorptions of effete products, and combats blood stasis, thereby relieving congestion. To comprehend this, the difference in the action of the current upon the voluntary and involuntary muscles must be understood. In the voluntary muscles the contraction takes place as a whole, and by one effort; in the involuntary muscles the contraction is composed of two acts—a distinct contraction and a vermicular motion. The action is not spasmodic in the whole muscle at once, but in each fiber in turn, or in succession, producing the vermicular movement. The spasmodic contraction in the blood-vessels cuts off the blood supply, and the vermicular contractions produce the normal movement of the vessel walls, increasing the amount of blood passing in a given time; or, in other words, hastens the circulation, and produces rapid emptying of the vessels. We can make use of this action of the current in lessening capillary congestion.

It is the general opinion that there is no direction to the flow of the faradic current, and it is not endowed with polarity, being a to-and-fro current; consequently, there is no choice in the location of the electrodes, but experiments rather go to show that there is a direction to the current flow in that the descending current increases the vermicular movement of the blood-vessels, and augments the blood supply to a part, and that the ascending current lessens the flow by diminishing the vermicular movements. Bearing this in mind, then, we can apply it to increase or lessen the blood supply to different parts of the body. While there is apparently no difference in the poles of the faradic current, as shown by the galvanometer alone in the circuit, since with each make and break of the current the needle will oscillate in opposite directions; there is, nevertheless, a great difference physiologically, the negative pole being markedly stimulating and irritating in its effect, and the positive soothing. The reason for this is, that through the low resistance of the galvanometer coil, both make and break currents have a perceptible action, but through the high resistance of the human body, only the break current has sufficient electro-motive force to produce muscular contraction, or sensory impression, the other (the make current) producing no action. Hence, as applied to human tissues, the faradic current may be said to flow in one direction; and there is a difference in the pathological effect of the two poles.

Another point worthy of special consideration is the fact that the best effect of the secondary current is to be obtained only when the secondary coil covers the primary completely. In using the current from the long fine wire coil for its sedative effect, I observed that there was one relative position of the two coils where the current was least bearable; in fact, in some cases it could not be endured. This position was with the secondary coil standing from two-thirds to three-fourths covering the primary. In this position it is even more painful, or rather perceptible, than when completely covering the primary. In consequence of this noticeable difference, I for sometime worked by advancing the secondary coil rapidly when this point was reached until it completely covered the primary. It finally occurred to me that this could be overcome, and the best effect secured from the beginning of the application by placing a rheostat or controller in the battery circuit to regulate the current circulating in the primary coil, and tempering it at the start, so as to allow the secondary coil to be submitted to the full influence of the primary; then increasing the current by lessening the resistance of the rheostat or introducing more battery power. After trying several forms of rheostat for this purpose I had one constructed of German silver wire, which answers the purpose admirably and takes up very little space. By employing a rheostat of this kind two, three, four or six cells may be used, and the current may be graduated to meet the requirements of any case. The vibrator should be started with the least possible current that will run it smoothly, and the secondary coil is removed from the primary. Then placing the electrodes in position, the secondary coil is advanced slowly over the primary until it is completely covered. As the current becomes imperceptible to the patient a little more battery current is let in through the rheostat, and the increase is continued in this way until the desired strength is reached, all the while the secondary coil is receiving the full induction of the primary. In other words, the whole length of the secondary coil is employed during the whole of the application instead of a portion of it. This is important, for not until the secondary coil completely covers the primary does the whole coil receive the full induction. Hence it is necessary to proportion the current of the primary coil or battery circuit (the inducing current), so that the application may be made from the start with the secondary coil exposed to the full influence of the primary. By means of the rheostat introduced into the battery circuit the current can be regulated to a nicety, and by starting the vibrator with the least possible current at first, the secondary coil being removed from the primary, then moving it completely up and increasing the strength of the current in the primary coil by increasing that in the battery circuit, the current of the secondary can be so tempered and held under control that the most sensitive conditions may be brought under its influence; such conditions in which it would not be possible to apply the current in the ordinary manner with the best effect.

The clinical capabilities of the faradic current as derived from properly constructed apparatus, and the therapeutic indication, can be readily inferred from what has been said in the preceding pages. It will be unnecessary for me to attempt to tell you when sedation is required or when muscle stimulation is desirable. The different physiological effects of the induced current, as derived from differently constructed coils being recognized, the ground is comparatively clear. It may be well, however, to state that acute inflammatory process is amenable to treatment by this current under suitable conditions of high tension, as when it is derived from a coil of very fine wire of great length, if a maximum rapidity of interruptions with perfect smoothness is secured; the effect being obtained by restoring the equilibrium of the circulation.

The points in the paper upon which discussion is particularly invited are:

1. The construction of the secondary coil.

2. The different effect of coils of different sizes and length of wire.

3. The polar action of the current.

4. The regulation of the current by the rheostat in the battery circuit.

In closing I would make a plea for more attention being given to this valuable therapeutic agent, and for better teaching on the subject in medical colleges, and particularly in post-graduate schools. It is an agent of so much value that it will be found to be indispensable when properly understood. If the teaching is done and done properly, we will hear of fewer failures; because, when selected to be used it will be employed with more accurracy in appropriate conditions.

351 WEST FIFTY-SEVENTH STREET.

The Polyclinic.

MEDICO-CHIRURGICAL HOSPITAL.

WEAK collyria, frequently applied, are more efficient than strong collyria applied at longer intervals.—*Keyser.*

In strabismus convergens in children, the defect of refraction mostly found is a high grade of hypermetropia, often combined with astigmatism. When the hypermetropia is of a very high degree, there seems to be a certain power of suppressing the image, or use of one eye, without inducing the contraction of the internal rectus muscle—an apparent amblyopia without deviation of the ball.—*Keyser.*

When an incomplete operation for malignant disease is performed, the operation seems to act as a whip, causing the growth to return with renewed vigor. Therefore, do not operate at all, unless you remove the growth completely.—*Laplace.*

In all abrasions of the cornea, place a firm compress bandage over the eye. The object of this is to keep the ball still, as every movement of the eye causes the cornea to rub against the upper lid, producing severe pains. If the bandage is not firmly applied, the ball will follow the movements of the other eye, therefore some pressure must be brought to bear to prevent this. The epithelium of the cornea reforms in from twenty-four to forty-eight hours, and the bandage may then be removed.—*Keyser.*

Sometimes, even though you check a conjunctivitis neonatorum, if there has been an ulceration of the cornea, a staphyloma may extend from the scar. As long as this condition does not prevent closure of the lids, no operation is needed; but when such occurs, abscision, evisceration or enucleation must be resorted to.—*Keyser.*

COOPER HOSPITAL (N. J.) NOTES.

THE TREATMENT OF VAGINITIS.

IN vaginitis, the combination of the moist and dry methods of treatment will proved the most serviceable. The moist method, or the employment of the hot, medicated douche, is not alone sufficient for a speedy cure. The hot douche, medicated with bi-chloride of mercury (1 to 3,000), or with permanganate of potassium of sufficient strength to sharply discolor the water, or with borax, a drachm or two to the quart of water, is required for cleansing and antiseptic purposes. This, however, will not be thoroughly accomplished unless given while the subject lies in the recumbent posture. After the vagina has been antiseptically cleansed, the inflammation may be materially reduced by the insertion of a tampon of antiseptic cotton (preferably the bi-chlorinated) into the vagina for the purpose of separating and keeping apart the vaginal walls. This constitutes the dry method of treatment. The virtues of the cotton may be increased by dusting upon it bismuth, aristol, boracic acid or iodoform. A tampon should be inserted daily after the thorough use of the hot, medicated douche. If a vaginal inflammation is disposed to linger after these methods of treatment have been employed, applications of nitrate of silver are then required.—*Godfrey.*

THE TREATMENT OF PUERPERAL ECLAMPSIA.—In conclusion let me summarize as follows:

1. The exclusive use of the term puerperal eclampsia, to mean convulsions during pregnancy, and due to uræmic poisoning, is not warranted.

2. Puerperal eclampsia is generally due to uræmic poisoning, but it may be due to irritants in the alimentary canal; it may be hysterical or epileptic.

3. The intelligent management of this disease implies a recognition of these causes.

4. When due to uræmia, the result of acute parenchymatous nephrites, there are two great indications for treatment, combat the eclampsia and hasten elimination.

5. To control the convulsions in plethoric subjects, phlebotomy should be practiced, but not in other types of cases. The hypodermic injections of morphine in ⅓ or ½ grain doses is decidedly proper. Chloral hydrate per orem, or per rectum, is commendable in the early stages. Chloroform is of doubtful utility.

6. To hasten elimination, diaphoresis should be maintained until the coma yields or death claims the case. This can best be accomplished by the hypodermic use of pilocarpine and moist heat.

7. To secure the vicarious action of the alimentary canal, elaterium, croton oil, or calomel, should be given early and repeated if necessary. The agents may be passed into the stomach through a stomach tube.

8. A poultice of Squibb's powdered digitalis applied to the region of the kidneys is worth trying as a diuretic. In cases that can swallow, infusion of juniper berries and digitalis should be given per orem.

9. Evidence, both clinical and autopsic, has now accumulated until we are forced to acknowledge the gravid uterus holds a causative relation to acute parenchymatous nephritis, and is therefore a potential factor in the production of the cyclonic disease called puerperal eclampsia.

10. No attempt should be made to deliver the fœtus during a paroxysm.

11. As soon as the os is dilated or is easily dilatable, the efforts of nature to expel the contents of the uterus should be aided, and that, too, in all cases, not excepting those in which the convulsions have ceased.

12. Premature labor takes place or is produced in all cases that recover.

13. *Efforts at elimination should be made paramount to everything else in the treatment of this disease.*

—Wright, *Pacific Med. Jour.*

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THE NEW JERSEY MEDICAL EXAMINERS.

In the First Annual Report of the New Jersey State Board of Medical Examiners, we note the following results of the examination of candidates presenting diplomas from the Philadelphia colleges:

University of Pennsylvania, 14 passed, 3 rejected.
Jefferson, 8 passed, 5 rejected.
Woman's College, 2 passed, 2 rejected.
Medico-Chirurgical, 1 passed, none rejected.
Average grades attained:

University	81.$\frac{4}{17}$
Jefferson	74.6$\frac{11}{13}$
Woman's	78.0$\frac{3}{4}$
Medico	83.2

Percentage of successful candidates from each:

Medico-Chirurgical	100.
University	82.$\frac{6}{17}$
Jefferson	61.$\frac{7}{13}$
Woman's	50.

Of the unsuccessful candidates, 3 failed in materia medica, 4 in obstetrics, 14 in practice, 9 in surgery, 8 in anatomy, 3 in physiology, 8 in chemistry, 11 in histology, pathology and eye and ear diseases, and 10 in hygiene and medical jurisprudence. It will thus be seen that practice was the chair that presented the greatest difficulty; DaCosta's pupils only taking an average grade of 65.6; while Pepper's reached 74.6+, Walker's 72.5, and Waugh's one representative 76.

We looked over the list curiously, to find the reason of H. C. Wood's recent ebullition of wrath against the Board; and we found it. One candidate, who valiantly upheld the combined banners of the University and the Jefferson, seems to have found the weight too heavy; for, after attaining an average of 46 in materia medica, he disappears from the field. But as his candidates, collectively, attained the grade of nearly 89, Dr. Wood had no reason to complain of the Board, which gave Bartholow's pupils 83.6+.

The graduates of European schools made the following record:

One from Padua, took the grade of 75.3, failing in surgery; one from Bonn and Würzburg, 79.5, failing in practice and surgery; one from Leipsic, 94.2; one from McGill (Montreal), 90.7; and of two from Zürich, one took 71.5, failing in materia medica, practice, anatomy, histology and hygiene; while the other scraped through with 75.1, failing in obstetrics, anatomy, histology and hygiene.

IMPROVED VAGINAL DOUCHES.

DR. EDWIN PYNCHON describes, in the *American Gynecological Journal*, a device for securing the advantages of a post-partum douche without soiling the bedding. The apparatus consists of a short, hard-rubber speculum, a soft-rubber discharge pipe, and a hard-rubber vaginal tip, passing through a small hole on the upper side of the soft-rubber discharge pipe near its attachment to the speculum, and connected by a suitable hose with a fountain syringe, in which is the irrigating fluid.

The application is obvious. The irrigating fluid passes into the vagina through the small tube and returns through the large one, thus avoiding the soiling or wetting the bed.

Great minds evidently run in the same channels. About six years ago we became possessed with the idea that we had invented something valuable. We whittled out a wooden pad, somewhat like a truss pad, passed a short wooden syringe tube through it, projecting about an inch beyond the surface of the pad, and just below this passed another tube that stopped at the surface. The long tube was connected with the delivery pipe of a fountain syringe, and the short one with a similar tube leading to a receptacle for the out-flow. It was intended for use in cases where it was thought desirable to flush the vagina with water hotter than could well be borne by the skin; as Emmet recommended. But just as the apparatus had assumed definite shape, we received an advertisement from an New England firm, of an instrument that embodied the essential features of our own idea, and was protected by a patent; while at present there is running in this journal the advertisement of a Chicago house that is supplying a very similar instrument.

Nevertheless, our own contrivance was the best; and for these reasons: Being of wood, a non-conductor of heat, much hotter liquids could be used than where a metal tube was employed, as in the Maine apparatus. In the latter, the vagina was occluded by a rubber ball; and this soon collapsed and rendered the apparatus useless.

The semicircular shape, and the size, of our pad allowed it to be used in all cases, as, no matter whether the vaginal opening were large or small, with the ball pressed firmly against it there was no leakage. In Dr. Pynchon's apparatus it is impossible to prevent this, even with three tubes of different sizes.

The shape of our pad also allowed the whole vaginal mucosa to be subjected to the douche, whereas

a speculum that is inserted prevents the contact of the fluid with a great part of the vaginal wall.

The short delivery tube prevents the accident to which a long tube is liable, of being inserted directly into the mouth of the uterus, and unintentionally administering an intra-uterine douche.

A small *pincette* was attached to the outflow tube; and when this was closed, the vagina became thoroughly distended, and the fluid was thus brought in contact with every portion of its surface. These advantages have not been obtained in any other apparatus we have since seen; though the Knap syringe comes nearer to them than any other.

Annotations.

DR. J. L. A. BURRELL, of Williamsport, Pa., died, October 24, of intestinal perforation. He graduated at the University of Pennsylvania in 1877, and had practised in Williamsport for twelve years, winning the highest esteem of the profession and the community at large. He was regarded as one of the best physicians in the interior of the State, and was also a vestryman of Christ Church. He leaves a wife and three young children. His fatal illness dated only from the preceding Wednesday, when he was seized quite suddenly.

IT looks as if the inevitable reaction against the Keeley epidemic had commenced. Evidently, all the newspapers are not in the "combine" to boom Keeley; and in the outsiders, items relative to failures, relapses, and deaths under treatment, are beginning to multiply. We are, frankly, sorry. We hope Keeley, or any other person who can do it, will continue to cure as many inebriates as he can possibly reach; and we don't care how much he makes out of them. And we hope that some attention will thereby be directed to the noble work of Mattison, Crothers, and others in the regular medical profession, who are working out the same problem honestly, and furnishing the materials out of which men of the Keeley stripe are making money. And we further hope that the medical profession generally will rouse itself up, and comprehend that something can really be done for the inebriate, and that it is our duty to do it, and not leave these unfortunates to the tender mercies of money-grubbing quacks.

IN the *Cleveland Medical Gazette*, Baldwin describes a singular case. A lady, aged twenty-two years, had a tumor as large as a cocoanut projecting from her vulva. The protuberance was found to consist of a prolongation of Douglas' cul-de-sac. It was laid open, and the fluid contents drained away. It was then found that on one side was an ovarian cyst, and on the other a cyst of the broad ligament, each the size of an orange. The reporter proceeds with his description in the following words:

"I therefore suggested that we try to secure enough local inflammation to cause obliteration of the sac, as in a case of hydrocele of the tunica vaginalis. I dipped my finger into a 1 to 1,000 solution of bichloride of mercury, and repeatedly applied this to the inside of the sac. The incision was then closed by silk sutures," etc. "Inflammatory reaction came on, but this was limited to the cyst, which was obliterated, and the patient was cured."

It appears, from this account, that the ovarian cysts were not touched, and that the above description refers merely to the protrusion from Douglas' cul-de-sac into the vagina. If this be the case, a cure can hardly be assumed until the cysts are disposed of in some manner.

FETID FEET.

THE cause of this unpleasant ailment is to be found in the unnatural custom of wearing shoes. Nature contemplated a shoeless animal when she made man, and she so arranged the epithelium on the soles of his feet as to provide for a rapid reproduction of the layers worn off in walking. So well suited to man's necessities was this arrangement, that Parkes, after discussing the merits of various foot-gear, concludes that the best shoe for soldiers is no shoe at all. But man had to improve on nature, and the way he has done it is by encasing the foot in an impermeable casing of tanned leather. This prevents the removal of the epithelium from the sole, and also prevents the escape of perspiration, which, keeping the dead epithelium moist, infallibly renders it odorous.

The reason why washing does not relieve this is, that soap and water alone are insufficient to remove the epithelium. No amount of rubbing will do this; and it is doubtful if anything short of a vigorously-wielded scrubbing brush will do so. But the Greeks had something better even than this. Some of our readers will remember the description given by Xenophon of the games instituted by Cyrus, before his march to the field of Cunaxa, and that among the prizes given to the victors were "golden flesh-scrapers." Not even a brush equals in efficiency the scraping with some metallic instrument, like a dull paper-cutter.

We would recommend, therefore, for fetid feet, that the sufferer should soak the feet in hot water, and scrape them well, every night until the nuisance is abated; and to keep this up weekly thereafter, with morning ablutions of cold water with no soap, but followed by vigorous rubbing with a coarse towel. This is better than all the salicylated powders or ointments.

Letters to the Editor.

NOTES ON PHENACETINE-BAYER AND SULFONAL-BAYER.

YOUR readers may be interested to know of some recent uses of these medicaments in general practice. One of my patients was a man, who had undergone the operation of lithotrity; since which he has passed numerous small pieces of stone, and is obliged to use a catheter to relieve the pain, and possibly to remove a piece of the calculus, which causes intense pain. He had been obliged to take a morphine pill or use opium every night to procure sleep. The first night after I had given him grain x of sulfonal-bayer, in powder, dropped on the tongue (and a drink of water to wash it down), the patient went to sleep in two hours, and remained sleeping two and one-half hours.

On the second night I gave two doses of grain v each, two hours apart. As my patient was suffering considerably I also gave grains v of phenacetine, which relieved the pain and procured, with the sulfonal, five or six hours of good, refreshing sleep.

The patient said he "had not slept so well for months." Since October 5 he has taken but ⅛ grain dose of morphine, and once only 1 grain of opium.

Under the treatment with sulfonal and phenacetine, at night, in conjunction with fl. ext. of pichi gtts. xx twice daily, and the use of the Buffalo Mineral Water, my patient is much improved.

I have also used both sulfonal and phenacetine with marked success in colitis, in inflammation of the small intestines, intermittent fever, neuralgia, etc.

I consider sulfonal a most potent hypnotic. Phenacetine is, to my mind, one of the best analgesic remedies we possess. DR. M. F. OSBORNE.

DARIEN, CONN.

TWO CASES OF ABNORMAL MENSTRUATION.

CASE I.—Eva C., aged nine; brunette. An imbecile, who has menstruated regularly from her seventh year. Enjoys perfect health; she is well developed, large limbs, perfect mammas, etc. Weighs one hundred and twenty pounds. In this climate we think this quite an unusually early menstruation.

CASE II.—Mrs. W., aged twenty nine; mother of four children; menstruates regularly during her pregnancies. Flow same as usual in appearance and amount. Has never had any abortions or difficulty in her confinements. O. A. RHODES, M.D.

WASHINGTONVILLE, OHIO.

Book Notices.

A TEXT-BOOK OF PHYSIOLOGY. By M. FOSTER, M.D., LL.D., F.R.S., Professor of Physiology in the University of Cambridge, England. Fourth American from the fifth English edition, thoroughly revised. Octavo 1,072 pages, 282 engravings. Cloth, $4.50; leather, $5.50; Philadelphia: Lea Brothers & Co.

The last English edition of Foster has received in our pages the encomiums it so justly deserves. There remains but little to add concerning the present American edition, except that the work is presented with that beauty of typography for which the Lea Brothers are noted. The American editor has enhanced the value of the work by references to the physiological action of some of the more important drugs, and by multiplying the illustrations.

To the student physiology is usually the most tedious of his tasks; but when he has become a practitioner he finds that that he cannot give too much thought to this study. If we could imagine a practitioner of twenty years' standing, who in that time had devoted himself earnestly to his work, and yet had failed to procure any physiological work later than his college text book, what would be his sensations on opening such a work as the one before us? He would be amazed at the progress made. He would find the book more interesting than any novel; at every turn he would see cause for wonder. His difficulties would vanish and his therapy become comprehensible under the clear light poured upon it from this source. A veritable mine of riches would be opened up to him.

We have taken pains, at all times, to direct our readers' attention to the valuable works on physiology issuing from the press. No other branch of medicine has received so much of the limited space at the disposal of the reviewer in a weekly, as no other works are of such importance to the physician.

ESSENTIALS OF BACTERIOLOGY. Being a Concise and Systematic Introduction to the Study of Micro-organisms, for the use of students and practitioners. By M. V. BALL, M.D. With seventy-seven illustrations, some in colors. Philadelphia: W. B. Saunders. 1891. Cloth; pp. 159; 12mo. Price, $1.00.

This is one of the very few compends that has any reasonable right to existence. In the present case, the *raison d' etre* may be thus expressed: Many men would like to know something of bacteriology; not to master the subject, but enough to be qualified as appreciative readers and listeners; to keep "in touch" with the Kochs and Pasteurs who are revolutionizing things and knocking the old pathology topsy-turvy about our ears. But we think we haven't time for such studies. We are like Martha, engrossed in the routine of living, and we want our pabulum ready cooked, ready masticated, so that we can bolt it as we do our meals. That is just what this Buffalo man has done for us, and his little book is just what vast numbers of "busy practitioners" want. Many will never want anything better; but some will so fully appreciate the work that they will be led into the study of the greater works, such as those of Frænkel, Crookschank, Macé, and Eisenberg, from which Ball has drawn his materials.

ARTIFICIAL ANÆSTHESIA AND ANÆSTHETICS. By DE FOREST WILLARD, R.M., M.D., Ph.D., and LEWIS H. ADLER, JR., M.D. 1891. George S. Davis. Detroit, Michigan: Cloth, 50 cents; paper, 25 cents.

ADDRESSES, PAPERS AND DISCUSSIONS IN THE SECTION OF STATE MEDICINE, at the Forty-second Annual Meeting of the American Medical Association, at Washington, D. C., May 5–8, 1891. Chicago: Printed at the office of the Association. 1891.

LA PRATIQUE JOURNALIÈRE DES HÔPITAUX DE PARIS. Aide-mémoire et formulaire de thérapeutique appliquée, par le professeur PAUL LEFORT, 1 vol. in-18 de 360 pages, cartonné, 3 fr. Ce volume fait partie du "*Manuel du Médecin-praticien.*" Librairie J.-B. Baillière et Fils. 19, rue Hautefeuille (près du boulevard Saint-Germain), à Paris.

In this volume is presented an outline of the daily practice of the Paris hospitals. Diseases are taken alphabetically, and the matter is divided uniformly into treatment, local and general, regime, and prophylaxis. One hundred and thirty-five clinicians are quoted, and 518 extracts from their notes are given. New remedies and antisepsis are given special prominence.

Under the head of diphtheria are given the views of Bouchard, Bouchut, H. Huchard, C. Paul, J. Simon, Sevestre, Gaucher, and Hutinel; while for typhoid fever, we find the treatment of Bouchard, Jaccoud, Hayem, Debove, Millard, Hallopean, Chauffard, Gérin-Roze, Legroux, Huchard, Juhel-Rénoy, Hirtz and Josias. Much importance is given to skin diseases, trichophytosis and impetigo being each allowed more space than tuberculosis. As a picture of Paris hospital practice the book is of considerable interest.

SENILE PRURITUS.—Dr. Besnier, writing in *l' Union Médicale*, recommends the following method for the relief of pruritus in the aged: Every evening the body is sponged with a lotion, warmed to 104° F., to each quart of which is added one ounce of a solution of one part of carbolic acid in fifty parts of aromatic vinegar. After drying, the parts are powdered with one of the following: Salicylate of bismuth, ℥v.; powdered starch, ℥iij.; or finely pulverized salicylic acid, ℥ijss.; powdered starch, ℥iij. Bran or starch baths are also recommended.

The Medical Digest.

MENTHOL CAMPHOR.—The important point to be emphasized in the use of this, as well as other potent remedies, is the choice of the proper strength in adapting it to each individual case in order to secure the best results. In chronic hypertrophic rhinitis in a person of dull sensibilities, a 25 per cent. solution may be used with excellent effect; whereas, in the opposite extreme of temperament, in which the Schneiderian membrane is exquisitely hypersensitive, a first inhalation stronger than the 3 or 5 per cent. solution, may appear to act as an irritant.

I have injected a 10 per cent. preparation in lavoline into the Eustachian tube, which was closed so firmly that it was impossible to inflate the middle ear by the Valsalva or Politzer method, with the result of opening the tube so well that on the following day there was no difficulty in injecting remedies through it into the tympanic cavity. This has occurred repeatedly.

No ill results have followed the injection of 5 and 10 per cent. solutions into the middle ear, but in several cases of catarrhal affections of that cavity the hearing was improved, and the head has felt clearer after the injections.

I have applied the full strength camphor-menthol to eczematous eruptions and found that it relieved the pruritus and reduced the swelling and redness. It had a similar effect in herpetic eruptions.

Finally, camphor-menthol contracts the capillary blood-vessels of the mucous membrane, reduces swelling, relieves pain and fullness of the head, or stenosis, arrests sneezing, checks excessive discharges and corrects perverted secretions.

—Bishop, *Jour. Am. Med. Asso.*

SULFONAL POISONING.—Poisoning by large doses of sulfonal have been very rarely noticed. A laborer in Riedel's manufactory wishing to get a satisfactory sleep, took about three tablespoonfuls of sulfonal. Thereupon he slept four days and nights, when he awakened. He slept one and one-half days longer, and afterwards was somewhat dizzy, without experiencing further disagreeable consequences.

The present case is that of a fifteen-year-old, healthy apprentice, in a drug house, who was transferred from the surgical to the medical clinic, with the statement that he had poisoned himself with some unknown substance. He had a temperature of 96° and was profoundly unconscious; respiration easy and quiet; pulse 100, rather small, but regular. The patient's condition was not alarming, and he was treated during the night with warmth and excitants.

On the following morning the patient was quietly sleeping; the countenance slightly reddened; the mouth closed; the respiration quiet (18) and deep; pulse 96 and extremely variable; reflexes uncertain, except that the corneal reflex was always distinct. The pupils, of medium dilatation, reacted variably to light, returning immediately to their former size.

The patient did not react to cries and shaking. Pricking of the face, hands and feet produced no effect, except a distinct widening of the pupil. Now and then languid jactitation occurred.

Salicylic acid and phenacetine were mentioned as possible causes of the condition, but the chloride of iron did not react upon the urine. Finally, we learned that two boxes of 50 grammes each of sulfonal (over three ounces) were missing.

The patient now received, beside excitants and cold douches every two or three hours, rectal injections of 200 to 400 ccm. of lukewarm water (later milk and wine, also), in order to hasten the excretion of the substance by increasing diuresis. We were successful in keeping up a daily passage of about 1,000 ccm. of urine by the patient, who always retained the repeated injections of small amounts of water, although he received nothing by the mouth. There was neither albumen nor sugar in the urine. Professor Jaffe was able to detect sulfonal in it, excreted unchanged.

On the third and fourth days the patient slept soundly. He reacted better to irritants, but without awaking.

The temperature, which at his admission was 96° to 101.3° on the fourth day, fell to normal on the second day; rose to 100.8 two days later, and then fell to normal, where it remained. On the part of the lungs there was nothing pathological. The pulse had now become good and the respiration peaceful. No defacation.

On the fifth day the patient opened his eyes repeatedly, but was completely unconscious. The pupils were wide and reacted sluggishly. After a time languid answers came in response to energetic questioning: "What have you taken?" "Sulfonal." "How much?" "A hundred grammes." His speech was slow and labored. He immediately fell asleep again.

On the sixth day he answered questions slowly but rationally, and took nourishment by the mouth. He imagined he was on a ship (dizziness?). In the course of the day he could see everything. Ocular field normal. He could not stand or walk without assistance.

On the palmar surface of both wrists there was an itching exanthema of numerous small, pale-red papillæ, as large as the head of a pin.

On the seventh day the patient was in full possession of consciousness, yet felt dull and dizzy, and remained in bed.

On the eighth day the exanthema had faded. The patient left the bed and was dismissed on the following day in perfect health.

It was substantiated that the patient had taken the whole contents of two boxes of finely powdered sulfonal, of 50 grammes each, and that he had washed down the largest part with considerable amounts of water. Thereupon he went into the open air and walked about three quarters of an hour. He could give no account of himself after this time. After six hours he was found unconscious and was made to vomit, and was then brought into the clinic.

An extraordinarily large amount of sulfonal was absorbed, for the patient did not vomit until six hours after its ingestion, and after an unconciousness of five hours. A part had, without doubt, already passed into the intestine. Furthermore, the patient had no movement of the bowels until the fifth day, and unchanged sulfonal was excreted in the urine.

The favorable outcome is to be explained by the slowness of the process of absorption in the alimentary canal, caused by the difficult solubility of the sulfonal (according to Kast, 1–200 in the gastric juice at the body temperature), and its excretion by the urine. Hence, the importance of free diuresis in such cases.

Finally, our case shows that sulfonal does not possess a cumulative action, provided that the secretion of urine continues to be sufficient.

—Ernst Neisser, *Med. Woch., May 21, 1891.*

GOLD IN PHTHISIS.—Miss S., aged twenty-eight years, medium height, weight eighty-five pounds, fair complexion, dark hair. Four years ago she had a spell of illness, pronounced malarial fever, with cough and pain in chest. Cough continued for a year, more or less severe, with expectoration of white and yellow sputa. Without treatment cough and expectoration gradually lessened, but a dry, hacking cough continued, increased by colds, which also caused a return of the expectoration. About a year ago she had an attack of la grippe which settled on her lungs and throat. She was in bed and very sick for a week, and from this time cough, expectoration and pain in the chest and throat continued, with no improvement, up to the time I was called to see her, in February last. Physical examination revealed dullness over upper portion of the left lung with interrupted inspiration, prolonged expiration and moist râles throughout this region. The throat showed evidences of chronic pharyngitis, the tissues about the glottis were swollen and the voice was husky. Temperature, 100° to 101° F. The face had a hectic flush, and she complained of great debility. I found, on questioning her, that she first menstruated at the age of fourteen, and had rarely been regular. At first too long between periods, then regular for two years, then again going too long, and for the last year too free. Suffers a good deal at such times. Weight: The most she ever weighed was 109½ pounds, at nineteen; then about 100 for some time, and since her first sickness 85 to 90. Appetite poor; bowels costive; sleep poor.

Family history: Father died at the age of sixty-seven of Bright's disease, complicated with throat and lung trouble, with cough and expectoration. Mother died at the age of sixty-one of abscess of the liver. In younger days had lung trouble. Father's father and mother, four of his sisters and eight brothers died of consumption. Mother's people generally healthy. No lung trouble, with the exception mentioned. Patient's own brothers, four, and sisters, two, all living. Two of the brothers have had lung trouble, and one has had hemorrhage. Both sisters have weak lungs, and are subject to cough. Such is the history of my patient, elicited when she came under my care.

After seven months' treatment with hypophosphites, etc., nothing had been gained. I now concluded to try the hypodermic injections of iodine and gold sodium chloride, and sent to Messrs. Parke, Davis & Co., for their preparations used and recommended by Gibbes and Shurly. I commenced with the iodine, 10 minims, containing $\frac{1}{15}$ grain. I may say here I had some trouble to induce my patient to try the treatment, and she only yielding after a great deal of talking and explaining. The iodine proved, as mentioned by the authorities quoted, very painful, and I found, as they found, the gluteal region the best place for the injections, causing less pain and irritation here than elsewhere. Steadily the dose was increased up to $\frac{1}{8}$ of a grain. I have not gone beyond this dose, although it is recommended to go as high as ½ of a grain.

After two weeks' use of the iodine the gold solution was commenced, $\frac{1}{15}$ of a grain, and increased to $\frac{1}{8}$ of a grain, continuing the gold for two weeks, then giving the iodine for a week, then the gold for two weeks.

All other medicines were stopped. The inhalation of the chlorine gas has not, as yet, been tried in this case. The administration of the gold proved much less painful than the iodine. I should state that one injection a day was given, the patient coming to the office every morning, and as she soon began to improve there was no trouble to get her to come regularly. So far there has been no abscess or inflammation of any moment, only little lumps remaining long after the hypodermic injections have been made, marking the places where they have been given. The preparations are very hard on hypodermic needles, and it is best to use platinum or gold-plated needles.

Now as to results. Although the patient experienced no particular effect directly after the administration of the drugs, nor, indeed, at any time, as far as she could tell, due to their physiological action, after a few days the cough lessened and finally ceased, she gained in strength gradually but surely, appetite improved, bowels became regular, and sleep more natural. The throat still pains her at times, but is much better, not giving her half the trouble it did before the treatment. Weight has increased five or six pounds. Though when these drugs were commenced she could scarcely ride to the office, a distance of only a mile and a half, a week ago she rode in a buggy to Xenia, some thirty miles, with comparatively little fatigue. Her whole appearance has changed for the better. Menstruation has become more natural, the physical signs show improvement, the râles are all gone, and the breathing is easier, fuller and more uniform. Temperature normal. This improvement is the more remarkable from the fact that the patient suffered from neuralgia, caused by bad teeth, and during most of the time has been under the treatment of the dentist; and many of us know how very trying that is.

I fully realize that it takes more than one swallow to make a summer, and also fully realize that my patient is yet far from safe, that many dangers beset the way to a perfect recovery; yet, so far I can truthfully say, I have rarely, if ever, seen a more satisfactory result from the action of medicine in all my medical experience. Certainly the hypodermic administration of iodine and chloride of gold and sodium deserves a fair trial at the hands of the profession in that dreadful, yet prevalent disease, pulmonary consumption.—R. T. Trimble, *Lancet-Clinic.*

THE INFLUENCE OF HELENINE ON TUBERCULOSIS.—It has long been desired to find a drug capable of influencing the course of phthisis and tuberculous diseases generally. Many drugs have been introduced as specifics, but the results of further experience have never substantiated the statements of their original introducers. In the case of helenine, a substance derived from "inula helenium," the statements as to its action in tuberculosis seem to rest on a somewhat better and more scientific basis, and it was with a view of corroborating or confuting the statements made as regards its efficacy that the present research was undertaken.

Before giving my own results it will be as well to give a short epitome of the work already published on the question. In 1883, Valenzuela stated that he had used helenine with success in cases of tuberculosis, early phthisis, pertussis, etc. The drug was described by him as possessing a yellow color, of formula $C_{21}H_{28}O_3$, with melting point 72° C., and boiling point 140° C.

In 1885, Baeza stated that the drug diminished all the secretions, but especially those of the trachea and larynx. In small doses it prevented the sialagogue and dieuretic action of jaborandi. He found, too, that 0.01 gramme, added to 1 liter of urine, prevented

putrefaction. In the same year Korab stated that tubercle bacilli suspended in sterile serum, to which had been added a small quantity of helenine, refused to develop, and the serum was incapable of inducing tuberculosis if injected into animals. He also stated that, if given in food, helenine acted as a preventive to infection by inoculation, and modified favorably already existing disease. The formula of the body employed by him was stated to be C_6H_8O.

In 1887 Marpmann wrote two important papers, dealing with both the chemical and therapeutic action of helenine. He stated that helenine consisted of two bodies, alantin and alantic acid, both of which were useful in medicine. Their administration caused death of the bacilli in tubercle nodules, and they also acted as expectorants. On man the drug had no injurious action ; it was excreted mainly by the lungs, and after prolonged administration to phthisical patients the tubercle bacilli disappeared from the sputum. The excretion of urine and of uric acid was also increased, and it was suggested that the drug might therefore be useful in chronic gout.

It would seem from the above extracts that while all were agreed as to the efficacy of a substance obtained from elecampane root in tuberculosis, there was a considerable discrepancy as to the drug employed. It was very desirable, therefore, to make a preliminary chemical investigation as to the actual substances obtainable from the root. The literature on the subject is somewhat scanty, but we find in Phillip's *Materia Medica* the following data :"Crystals may be obtained by distilling or even gently heating the root, and are described chemically as the anhydride of alantic acid ($C_{15}H_{20}O_2$). This is accompanied by a small quantity of helenine (C_6H_8O), also crystalline, and of alantic camphor ($C_{10}H_{16}O$), which in taste and smell suggests peppermint. The anhydride obtained by distilling the root with water is impregnated with alantol, which may be separated as an oily liquid."

At Dr. Brunton's suggestion I communicated with Dr. Schuchardt, of Görlitz, who promised to prepare me substances as follows :

1. Helenine—melting point, 109 to 110° C. Formula, C_6H_8O. White crystalline needles.
2. Alantcamphor ($C_{10}H_{16}O$), a crystalline mass, melting point 64° C.
3. Alantic anhydride, crystalline, melting point 66° C.
4. Alantol, a yellow liquid.

Difficulties apparently arose, however, in isolating these substances in quantity, and up to the present I have only been able to obtain from him a supply of pure alantic anhydride.

I also made, with the aid of Mr. Ball, F.C.S., of the firm of Burroughs, Wellcome & Co., to whom my best thanks are due, an attempt to isolate some of the above substances. By sublimation we obtained, as a first product, a camphor-like body, which sublimed in plates, and melted at 60° C. to 62° C. On raising the temperature somewhat higher, a substance sub limed over identical in appearance with the crystals obtained on exposing turpentine to sunlight for a prolonged period. These crystals were needle-shaped, with a melting point at 68° C. to 69° C.

During the sublimation of the first body it was noticed that while this collected in the "head" of the apparatus, another substance collected in the form of crystals in the receiver. We believe that this will prove to correspond with the substance alantic anhydride, and to differ from "helenine" only in the fact that it is a less oxidized body. These substances were all soluble in fats, spirits, ether, chloroform and petroleum ether.

During the distillation of the powdered root with alkaline water, a volatile liquid, possessing a very pungent odor, passed over in small quantities into the receiver and dissolved in the water. We have not been able to obtain any of this substance in the pure state, or to separate it even by the aid of a freezing mixture. We assume, however, that this correponds with the alantol of other workers. Lastly, we have extracted a yellow resin from the residue left in the retort.

The only substance we have been able to prepare in large quantities is that which we consider to be alantic anhydride, and it is only by a very laborious process of fractional sublimation that we can obtain this substance of a constant melting point of 66° C. The other bodies were, however, isolated in quantities sufficient for laboratory experiments.

My subsequent experiments have been carried out with all of the above substances, and with Schuchardt's "alantsaure anhydride." I first directed my attention to the influence of these substances on the growth of the tubercle bacillus, and of some other micro-organisms in artificial culture, mixing them in various proportions with the nutrient media prior to inoculation with the organism. In this way I have found that any of the crystalline bodies will prevent the growth of the tubercle bacillus, if present even in the proportion of 1 in 10,000. I have confirmed this with various nutrient media, but the result is the same whether I use solidified blood serum, agar-agar glycerine mixture, broth with glycerine, broth with solid egg albumen, or a solution of alkali albumen obtained from blood serum (sheep) or from egg albumen. All of the above, without the addition of the elecampane derivative, form excellent media for the cultivation of the tubercle bacillus.

I have further found, with the liquid media containing helenine, that these, even if containing large quantities of bacilli in suspension, are incapable of producing tuberculosis, or even an enlargement of the nearest lymphatic glands when inoculated into healthy guinea-pigs. Inoculations of normal nutrient media with these cultures also fail to produce any growth. I may, therefore, conclude that the drug, even in the strength of 1 in 10,000, is fatal to the tubercle bacillus, and my results in this particular fully corroborate those of Korab.

I have incidentally attempted to grow other micro-organisms on the same medicated media, and it may be interesting to state here the results obtained. In every case I employed solid media, to which were added what is probably a mixture of helenine and alantic andydride. I found that the more luxuriant and rapidly-growing micro organisms were practically unaffected in their growth by the presence of even 1 part of the drug in 1,000 of the nutrient medium. On the other hand, the streptococci (for example, st. pyogenes, st. erysipelatis) and some bacilli (for example, bacillus typhosus, bacillus mallei) refuse to grow on these prepared media.

Having established, then, that helenine and the associated bodies have a real action on the tubercle bacillus, I next desired to find out the influence of the drug on the tuberculous process in animals. The lines on which I have worked are as follows :

1. To administer the drug to guinea-pigs during prolonged periods, and subsequently to inoculate them with tuberculous material, control inoculations being made with normal animals.

2. To prepare the animals by feeding them on helenine; to inoculate these, continuing the feeding with the drug.

3. To inoculate animals with tuberculous matter, and then to commence feeding them with helenine.

Owing to the very slight solubility of all the elecampane derivatives I was obliged to use them in the solid form, and I found it most convenient to administer the dose either in the form of a pill, or, better still, as a small tablet, which was kindly made for me by Messrs. Burroughs, Welcome & Co. These tablets were very compact, disintegrated fairly readily, and ensured accuracy of dose. The preparation used was always either the alantsaure anhydride of Schuchardt or the mixture of helenine with alantic anhydride (of a somewhat higher melting point) prepared by Mr. Ball.

Without entering into details as to the result in each case, I may state that, however great the daily dose of helenine, no ill effect was produced by the drug itself; but in no case am I able to say that the course of the disease following inoculation with virulent material was arrested. That it was considerably retarded, however, I think there can be no doubt. This is shown both by the date of death and also by the condition of the organs, as seen under the microscope. In the first series of experiments I used tuberculous sputum for inoculating the animals. Only three animals were used in this case; the control died of acute tuberculosis in fifty-seven days; the other two died, one after sixty-seven days (acute), the other after ninety-three days (caseation and cicatricial tissue very abundant).

Series 2 was inoculated from the liver of the previous control. The dates of deaths were as follows:

Guinea pig, 1, control.	Died in 109 days.
Guinea-pig, 2, control.	Died in 161 days.
Guinea-pig, 3, fed.	Died in 157 days.
Guinea-pig, 4, fed.	Killed in 136 days.
Guinea-pig, 5, fed.	Died in 179 days.

The last two animals presented nothing but very chronic lesions; the nodules were considerably cicatrized, and the lymphatic glands were much enlarged and fibrous. Very few bacilli were found in the tissues of any of the "protected" animals.

Series 3 consisted of ten animals, three being controls, and seven protected by feeding with helenine.

Guinea-pig, 1, control.	Died on the 48th day.
Guinea-pig, 2, control.	Died on the 54th day.
Guinea-pig, 3, control.	Died on the 43d day.
Guinea-pig, 4, fed.	Died on the 62d day.
Guinea-pig, 5, fed.	Died on the 81st day.
Guinea-pig, 6, fed.	Died on the 29th day.
Guinea-pig, 7, fed.	Died on the 89th day.
Guinea-pig, 8, fed.	Died on the 70th day.
Guinea-pig, 9, fed.	Killed on the 121st day.
Guinea-pig, 10, fed.	Died on the 135th day.

This series seems to show that the animals derived a considerable amount of protection from the helenine feeding. They were inoculated from human sputum, and the death of guinea-pig No. 6 was probably due to accidental infection. The lesions in the six protected animals exhibited appearances identical in character with those observed in the previous series, the microscopic appearance of the lungs showing none but old cicatrized tubercles with very few bacilli; in fact, a careful search was necessary to discover their existence in several cases.

Series 4 consisted of five "protected" animals and three controls. They were inoculated from a first culture on serum obtained from one of the controls of the last series. They received daily doses of the drug in pill form, and some of the powdered root was mixed with their food. The atmosphere of the room in which they were kept was also impregnated with eucalyptus oil. The result was as follows:

Guinea-pig, 1, control.	Died in 48 days.
Guinea-pig, 2, control.	Died in 59 days.
Guinea-pig, 3, control.	Died in 44 days.
Guinea-pig, 4, control.	Died in 89 days.
Guinea-pig, 5, control.	Died in 106 days.
Guinea-pig, 6, control.	Died in 99 days.
Guinea-pig, 7, control.	Died in 135 days.
Guinea-pig, 8, control.	Died in 120 days.

The result is thus not markedly better than in the previous series.

Series 5. Six animals were inoculated in this series. Instead of feeding them with the drug, I administered it dissolved in olive oil and injected it deeply into the subscapular fossæ. At first I had considerable difficulty from the fact that the injections produced local suppuration. I attribute this to the fact that the syringe used was difficult to sterilize, and thus allowed of the introduction of micro-organisms which produced the suppuration. Since I have adopted the syringe recently described by me in the *British Medical Journal*, I have had no difficulty from this cause. The oil is easily absorbed, and the animals remain perfectly well under the treatment. Results were as follows:

Guinea-pig, 1, control.	Died in 54 days.
Guinea-pig, 2, control.	Died in 36 days.
Guinea-pig, 3, control.	Died in 70 days.
Guinea-pig, 4, injected.	Died in 76 days.
Guinea-pig, 5, injected.	Died in 42 days.
Guinea-pig, 6, injected.	Died in 99 days.

These results were not entirely satisfactory, so it occurred to me to use, instead of a very virulent bacillus, one which had been attenuated somewhat by cultivation on glycerine agar-agar, but which was still capable of producing death in a normal animal. Here I met with the difficulty that it is very easy to render the tubercle bacillus so weak that it is incapable of producing anything but hardness of the lymphatic glands nearest the seat of inoculation. However, by using the same tube for the whole series I was able to obtain trustworthy results.

Series 6. Eight guinea-pigs, 4 of which were controls:

Guinea-pig, 1, control.	Died in 93 days.
Guinea-pig, 2, control.	Died in 108 days.
Guinea-pig, 3, control.	Died in 130 days.
Guinea-pig, 4, control.	Still living.
Guinea-pig, 5, injected.	Still living.
Guinea-pig, 6, injected.	Still living.
Guinea-pig, 7, injected.	Died in 142 days.
Guinea-pig, 8, injected.	Still living.

It is now more than six months since these were inoculated. The animals now living presented soon after inoculation an enlargement of the lymphatic glands of the groin, with in one case local suppuration. This has disappeared, and the animals are now apparently quite healthy. I am repeating these experiments, which will, I think, far more nearly represent the kind of infection which takes place in the human subject than do those in which inoculation is made with a virus capable of setting up an acute miliary tuberculosis. The results as far as they go certainly tend to show that helenine has a real protective action against the disease.

I may add that nearly all the animals used in the above experiments were bred by myself, and kept under observation in the country for some time before use. I was thus able to choose animals which were in every way healthy, and which corresponded fairly

nearly in age. This would seem to be a great consideration in experiments on a disease, the duration of which depends so much on individual receptivity.

As regards the use of helenine in the human subject, I fear I have little to say. The great drawback to its extensive trial lies in the cost of the preparation. Dr. V. D. Harris kindly made use of it in some cases under his care at Victoria Park, but he employed only small doses (6 gr. per diem), and I maintain that it will be necessary to use considerable quantities in order to obtain any appreciable effects. I have myself four cases now under observation, but they have not been taking the drug for a sufficient length of time to allow me to eliminate the effect of change of weather, etc. It will be better for me to defer any account of these till I have more definite information.

I have brought these results before the Association at this time in the hope that some others who have more ample opportunities than myself may be perhaps induced to make trial of helenine in early phthisis. I do not think I am justified in saying that any one of the constituents of elecampane root possesses greater value than the mixed product; probably this would meet all the requirements of clinical experiment.

The above research was carried out under the direction and at the cost of the Therapeutic Committee of this Association. I owe my very best thanks to Dr. Lauder Brunton, F.R.S., who has throughout given me very valuable suggestions and help, and in whose laboratory at St. Bartholomew's Hospital the experiments were mostly carried out.

—Bokenheim, *Brit. Med. Jour.*

FRENCH NOTES.

A. E. ROUSSELL, M.D.

TREATMENT OF PERTUSSIS BY THE VAPOR OF IODOFORM.—M. Chibret declares that he rapidly arrests the paroxysms of pertussis in children by powdering their ears with pulverized iodoform.

POWDER FOR INSUFFLATION IN OZENA.—

℞.—Salol	75	grains.
Boric acid	45	"
Salicylic acid	7½	"
Thymic acid	3	"
Pulverized chalk	120	"

M.—To be used as a snuff after having cleansed the parts with carbolized water.

A TREATMENT FOR THE LARYNGITIS OF SINGERS (M. Faulkner).—This treatment, according to the author, is intended for the acute laryngitis of persons who fatigue their voice.

A purgative is administered, we then use inhalations of cocaine, spray 1 per 100, and give internally a mixture of ammonia and tincture of aconite.

From time to time the patient should make use of the following pastille:

℞.—Morphine	$\frac{1}{60}$	grain.
Hydrochlorate of cocaine	$\frac{1}{60}$	"
Tincture of aconite	3	drops.
Powdered althæa	4	grains.
Sugar, q. s.		

For one pastille.

When the acute symptoms have subsided, we prescribe strychnine, in doses of $\frac{1}{120}$ grain, before meals. The author even repeats this dose at the time that the actor enters *en scene*. The action of the strychnine is efficacious, nevertheless we can understand that this medicament should be used with caution.

—*La Médicine Moderne.*

TREATMENT OF CYANOSIS IN CHILDREN.—We have reference to cyanosis consecutive to congenital malformations of the heart. This affection is not incompatible with an existence of twenty or even thirty years, if the patient follows certain hygienic rules, and is placed under appropriate treatment. According to Jules Simon there are two indications to follow in a hygienic point of view:

1. Avoid all that which will increase the action and fatigue of the heart.

2. Assist, by proper exercise, the development of the child predisposed by his affection to remain debilitated.

Avoid violent exercises — gymnastics, fencing, horse-back riding—employ only with caution hydrotherapy. Dry frictions and daily massage. Take great precautions against taking cold, as bronchitis entails serious accidents of asphyxia, etc. The judicious choice of climate, employment of dry frictions render, under this head, great service. The digestive functions should be watched, to avoid indigestion and prolonged constipation.

The tendency to apathy and somnolence presented by children with congenital malformations of the heart, should be respected up to a certain point. Exercise, particularly in the open air, should be permitted, in moderate extent, so as to not favor the natural tendency to tuberculosis. Prolonged sleep or a sojourn in bed is to be allowed.

Cold air irrigations are apt to easily produce ulcerations, which are obstinate, by reason of the circulatory troubles, consequently, the use of counter-irritants in pulmonary troubles should be used with a certain reserve.

The medicinal treatment consists especially in the use of digitalis, which is given at intervals for several days when the heart weakens. We should not exceed the dose of 15 drops of a mixture of equal parts of tincture of squills and tincture of digitalis in a child of three years. At the end of eight or ten days we suspend the medication.

Regarding tonics, we give very small doses of iodine, being careful to insure long periods of rest. By prescribing the wine of quinine diluted with water, after meals, we avoid constipation and irritation of the stomach. Arsenic and phosphate of lime may be of service. We will, in a general way, vary the preparations, and suspend treatment for a more or less extended period.

The employment of the medication and observance of the rules laid down, will insure to these children a tolerably long life, and in a fair number of cases a tolerable existence. But we should be very reserved as regards prognosis, and warn the family of the persistency of the disease, notwithstanding the amelioration abtained.—*Revue de Thérapeutique.*

Medical News and Miscellany.

ONE person in nine is left-handed.

FRANCE utilizes over 1,000 of her 1,100 mineral springs.

THE Berlin Teachers' College has been closed by la grippe.

DR. JOHN M. KEATING has located permanently at Colorado Springs.

THE largest family yet: Of 44,000 female teachers in France, 11,000 are sisters.

RATTLESNAKE oil is said to be worth $16 per ounce; at least this is the market price.

A NEW and real mean invention threatens to do away with the hello-girl entirely.

CATS cannot live in the rarefied air of Leadville. Rats enjoy a perpetual pic-nic there.

BUCHAREST is afflicted with an epidemic of influenza complicated with a skin eruption.

THE ashes of rice-straw are recommended by a Japanese surgeon as a surgical dressing, as absorbent and aseptic.

THE female doctors at the Philadelphia Hospital are exceedingly popular with their patients. It is said that the whole ward lights up when Dr. Janney enters it.

DURING the week ending October 31, there were reported in Philadelphia 117 cases of diphtheria with 39 deaths; and for the previous week, 108 cases and 39 deaths.

A CONNECTICUT man, evidently affected by the epidemic for daring surgery, attempted to relieve his cardiac rheumatism by cutting into the organ with his penknife.

JAPAN had 41,405 doctors at the end of 1889, being one to 968.61 of population. Besides this, she suffered under 32,111 midwives, 3,817 apothecaries, 8,959 druggists, and 573 hospitals.

A KEELEY patient at White Plains, after four or five days' treatment, developed delirium tremens and went gunning for the neighbors. Things like that will get the Keeley institutes disliked.

INSTEAD of iron-clad pies and gutta-percha sandwiches, travelers in Japan find the railroad lunch counter supplied with sliced lotus roots, burdock roots, lily bulbs, ginger shoots, and pickled green plums.

THE Philadelphia Board of Health has instituted an inquiry into the sale of the milk of tuberculous cows, and the University of Pennsylvania at once sets to work to capture the job for the Veterinary Department.

THE Philadelphia Hospital incubator has scored two successes recently; one with a colored baby found in a shoe box in the street; and the other, an infant removed by the Cæsarean cut from a young colored girl.

THE harder the wood, the more injurious is the inhalation of its dust by wood-workers. This can easily be made to harmonize with the germ theory; when we recollect that hard woods contain more substance, *i. e.*, more germs, than soft.

THE *New York Herald* says that "a creditable examination in school hygiene should be an indispensable condition of any person's appointment to the position of teacher." Just include school directors in the same category and we agree.

A PNEUMATIC inner sole or sock for boots and shoes has been brought out to confer great benefits upon people who have tender feet, etc. It is made of hollow India-rubber, inflated with air or gas under pressure, the external protective covering being canvas, linen, skin, or other suitable material, to adapt it to withstand the internal pressure of the compressed air or gas.

IT will not be needed: "We intend to establish a dipsocura at the World's Fair," said Mrs. Dr. Mary A. Seymour, State Treasurer of the Non-partisan Woman's Christian Temperance Alliance, "for the purpose of illustrating that dipsomania is a disease and can be cured."

THE RUSH MONUMENT.—Benjamin Rush, the patriot physician of the Revolution, is not likely to be forgotten. The annual appeals for funds to build him a monument will keep his memory green in the minds of the profession, even if the monument is never built.—*Country Doctor.*

IT is curious to note the slow but steady growth of the profession towards a comprehension of the import of intestinal antisepsis. Ferreira pronounces very favorably upon the treatment of yellow fever by salol. Courage, gentlemen, and perseverance! You will reach the sulphocarbolates by-and-by.

THE TEMPERATURE OF DRINKS.—A writer in a German paper gives the following as the proper temperatures for different sorts of beverages: Water, 54°; seltzer water and beer, 57° to 60°; red wine, 62° to 66°; white wine, 60; champagne, 46° to 50°; coffee, 73° to 79°; beef-tea, 100° to 125°; milk, 60° to 64°; hot milk, 93° to 95°.

THE great Pepper Free Library is following closely the footsteps of the usual Pepperian project. It is designed on a scale that renders the bequest of the late George S. Pepper totally inadequate, and subscriptions are requested, as well as annual contributions, for which the donors receive nothing.

Any one who wishes to enhance the glory of the late George S. Pepper, may do so by contributing funds, to enable the Trustees to do extravagantly the work Mr. Pepper left ample means to do properly.

IN the *Medical Brief*, W. H. Gray speaks of a case presenting these symptoms: Chronic diarrhœa; tympanitis; pains in abdomen; face pale and thin; appetite variable; general debility, and frontal headache. The administration of tænicides brought away three tape-worms of an incredible length.

It is not usual for these parasites to give rise to such marked symptoms as in this case. The frontal headache is so generally symptomatic of ptomaine poisoning, that it raises a curious question as to whether these worms secrete a toxine.

SEPTIC ENDOCARDITIS.—In *Practice*, J. T. Smith describes a case of septic endocarditis. Six hours after parturition the patient had a chill, with pulse 160, temperature 104°; soreness of legs; no venous inflammation, or pelvic tenderness, but sick stomach and delirium. After four days the fever abated, and in ten days convalescence was established. Three days later another chill occurred, followed by a week's illness of the same character. Then a third chill, with symptoms more marked than previously; temperature 105°; pain in left inguinal region; tender abdomen, and some tympanites. Three days later she complained of cardiac distress, and suffocative sensations. The pain and dyspnœa were increased by motion. The heart was tumultuous. After many days improvement began, but the heart symptoms remained, and she grew thinner and weaker, with scanty urine and colliquative sweats. The dyspnœa increased. He then began the use of gold and manganese, following Blake's method in tuberculosis. Two drops of Lord's solution were injected hypodermically every other day. This was continued for one month, and the case ended in complete recovery.

WEEKLY Report of Interments in Philadelphia, from October 24 to October 31, 1891:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess of brain		1	Inanition	1	13
Anæmia	1		Inflammation bladder	1	
Aneurism of the aorta	1		" brain	1	12
Alcoholism	1		" bronchi	6	4
Apoplexy	12		" kidneys	7	
Asphyxia		1	" larynx		1
Asthma	2		" lungs	13	12
Bright's disease	15		" peritoneum	6	
Burns and scalds		2	" pleura	2	
Cancer	13		" s, & bowels	3	7
Casualties	9		" spine	1	
Cerebro-spinal meningitis	1		Intussusception		1
Congestion of the brain	1	4	Jaundice	1	2
" " lungs	6	3	Lupus		1
" " bowels	1		Locomotor ataxia	1	
Childbirth	1		Malformation		1
Cholera infantum		5	Marasmus		10
Cirrhosis of the liver	2		Neuralgia of the heart	2	
Consumption of the lungs	42	2	Obstruction of the bowels	2	1
" " bowels	1		Old age	15	
" " throat	1		Paralysis	3	
Convulsions	2	20	Pyæmia	1	
" puerperal	1		Rheumatism	2	1
Croup		18	Shock, surgical	1	
Cyanosis		4	Sclerosis of the spine	1	
Caries, spinal		1	Scrofula		1
Debility	2	2	Septicæmia	4	
Diphtheria		40	Softening of the brain	5	
Disease of the heart	25	3	Suffocation, illuminating gas	1	
" " liver	*2		Suffocation		2
" " knee joint	1		Suicide, shooting	2	
Dropsy		3	Tumor, abdominal	1	
Dysentery	1	1	" of brain	1	
Erysipelas		1	" of kidneys	1	
Enlargement of the heart	3		Ulceration of the bowels	2	
Fever, scarlet		6	Uræmia	3	
" typhoid	5	2	Whooping cough		1
Hemorrhage, umbilical		2			
Hernia	1		Total	243	191

EDSON, who likes to say striking things, and who sometimes says good ones, states that "during over nine years' service in the health department of New York I have never seen a case of small-pox in a person who had been successfully vaccinated within five years, and the number of cases I have seen mount into the hundreds. During that period I have seen only one inspector of contagious diseases contract small-pox, and he was the only inspector who disbelieved in vaccination, and refused to have it performed on himself."

HYOSCINE.—Sighicelli has employed this drug in the form of the hydriodate. The dose used was a quarter to one milligramme subcutaneously. He is of opinion that one milligramme is the maximum dose that can be given with safety, and this quantity should be arrived at gradually. He considers the drug quite unsafe in the case of patients with cardiac troubles, as he finds it slows the pulse, lowers the arterial tension, and may produce paralysis of the heart. Serger, who used sulphate of hyoscine, found that it produced complete muscular relaxation, violent vertigo, inability to speak or to stand; in short, so much prostration and distress that it had to be discontinued. Such are, no doubt, the symptoms produced by a large dose of hyoscine, but it is certainly unusual to get such effects from the ordinary medicinal dose.

PENTAL.—The name of the newest anæsthetic is pental. Its inventor is Professor Von Mering, Director of the Medical Polyclinic in Halle. He observed, four years ago, that the tertiary amyl-alcohol produces a soporific effect, and since then it has been in use as a hypnotic. It occurred to him that the amyl corresponding to amyl-alcohol might be fitted for anæsthetic purposes, and this substance has now, after several vain attempts, been obtained. Its chemical composition is $(CH_3)_2$ CCH CH_3, and Mering calls it pental, owing to the circumstance that it contains *five* carbon atoms. It is very volatile and easily combustible. It can be administered exactly like chloroform, and the quantity required each time costs about sixpence. Anæsthesia sets in after three or four minutes, rarely later. It is not deep, but suffices to render small operations, such as the extraction of teeth, painless. It is neither accompanied nor followed by any unpleasant effects.—*Lancet.*

SOME beautiful specimens of tiny incandescent lights are now made for surgical uses. The smallest lamp manufactured is only 3 mm. in diameter and 5 mm. long. In medical practice where electricity is acquiring an ever-growing application, this lamp, owing to its small size, has made it possible to thoroughly inspect the bladder and stomach, into which it can be introduced. This application was illustrated at the Centennial Exhibition by a fish swimming in an aquarium with a lamp brightly glowing in its stomach. Another adaptation of the small incandescent lamp is to the copper rods which fit the handles or sockets now almost universally employed in connection with electric cauterizing knives. A doctor working with one of these knives can, in an instant, replace it by a lamp, should this become necessary, for instance in cases of mouth disease. The tiny lamp mentioned is also mounted on a laryngoscope, and is thus of great value in the treatment of infectious diseases.

THE unbounded faith in which human beings seem to place in new drugs, even in those in which little or nothing is known, is astonishing. Those we have are unhappily capable of affording relief in but a very small proportion of the cases we are called upon to treat, yet the cry is still for more! From the laboratory of the Western scientist and from the swamps of savage races, a steady current of new and untried drugs pours in, most of which are forgotten before even their names are known. At the opening ceremony of the session at the School of Pharmacy, Mr. Gainsford Bruse, M.P., expressed regret that so little had been done to examine and report upon herbs said to possess remedial properties. He mentioned that there were at the present time more than a hundred herbs at Kew that had recently been discovered, and were believed to possess medicinal virtue, and he seemed to anticipate that great benefit to the science of medicine would accrue from their being placed in the market. Would that people could be made to understand that we are suffering from a plethora of remedies, indeed, that our difficulty is to find diseases on which to use them. We have plenty of acquaintances and few friends among drugs, and what we want is the "friend in need."—*Hosp. Gaz.*

SEPTEMBER BULLETIN OF THE NEW YORK STATE BOARD OF HEALTH.—The month of September, compared with the preceding month, shows a diminished infant and zymotic death-rate, the chief diminution being in diarrhœal diseases, from which cause there were about 1,000 fewer deaths; there was also a small diminution in scarlet fever and measles. From malarial diseases there was a moderate increase. Typhoid fever increased from 171 to 287 deaths, and diphtheria from 266 to 334 deaths. The number of deaths attributed to diseases of the nervous system is considerably less, and about one-third fewer deaths occurred from accidents, chiefly drowning. The total number of reported deaths from all causes is 1,000 less than in August. Compared with September, 1890, the total reported mortality is 1,000 greater, the increase being, among local diseases, in deaths from diseases of the digestive and nervous systems, and from zymotic diseases there were about 4 per cent.

more deaths, the increase showing, relatively, in diarrhœal diseases, diphtheria, typhoid fever and scarlet fever. Typhoid fever epidemics have been reported from Auburn, Laurens and Russel, and a considerable prevalence is noted in localities in the Maritime district and along the Mohawk valley. Diphtheria has been unusually prevalent, epidemically, in numerous localities, and there were 100 more deaths in the State from this cause than one year ago. In thirty cities, with an aggregate population of 3,657,500, the average annual death-rate is 22.10 per thousand; 2.44 per cent. of all deaths were from typhoid fever, and 4.04 from diphtheria. In forty-seven villages with 417,000 population, the death-rate is 19.80; the percentage of deaths from typhoid fever is 4.90, and from diphtheria 2.74. Of 1,886 deaths occurring in rural towns, 3.92 per cent. were from typhoid fever, and 2.12 from diphtheria.

THE HOSPITALS OF PHILADELPHIA.

[CONTINUED FROM LAST WEEK.]

PENNSYLVANIA HOSPITAL, WITH INSANE DEPARTMENT.

Location: Hospital, Eighth and Spruce streets; Insane Department, Market street and Haverford avenue, from Forty-second to Forty-ninth street. Age: Hospital, one hundred and forty years; Insane Department, fifty years. Number of beds: Hospital, 225; Insane Department, 400; wards: Hospital, 7. Patients received: Acute, chronic (some), and venereal cases, alcoholism, adults and children. Patients not received: Contagious cases. Terms per week: $7 (alcoholism extra). Actual cost per week per patient: $7.98. Visiting hours: Monday, Wednesday, and Friday, 2 to 4 P. M. Resident physicians: Male, 4; appointed; term of service, twenty months. Nurses: Male, 8; female, 30; pay, $10 to $12, and $20; term of service, two years; training school, yes; kind of nursing taught, general; diploma or certificate awarded, yes. No special facilities for massage, electricity, or hydrotherapy. Clinics: Kind, medical and surgical; number, 2 per week; days, Wednesday and Saturday; hours, 10 A. M. to 12 M.; duration of clinics, October to May. Instruction for students: Clinics, yes; ward classes, no; terms, free. Maternity cases not taken. Dispensary work: Charge, free; departments, medical, 11 A. M. to 12 M.—surgical, 10 to 11 A. M.—gynecological, Monday, Wednesday, and Friday, 12 M.—nervous, Monday and Friday, 3 P. M.—eye, ear, and throat, 2 P. M.; average number of patients, 1,982 per month. Names of physicians of hospital.—Physicians: Drs. J. M. Da Costa, Morris Longstreth, Arthur V. Meigs, Morris J. Lewis; Surgeons: Drs. William Hunt, Thomas G. Morton, John H. Packard, John Ashhurst, Jr.; Pathologist, Curator, and Microscopist: Henry M. Fisher, M.D. Out-patient Department.—Physicians: Drs. Henry M. Fisher, John J. Owen, Caspar Morris, Samuel B. Shoemaker; Surgeons: Drs. Wm. Barton Hopkins, Richard H. Harte, Joseph M. Fox. Chas. B. Penrose; Eye, Ear, Throat, and Nose: George C. Harlan, M.D.; Gynecological Department: T. Hewson Bradford, M.D.; Mental and Nervous Diseases: Drs. Albert R. Moulton, Henry B. Nunemaker, Wm. H. Harrison, Eli E. Josselyn. Insane Department. — Physician-in-Chief and Superintendent: John B. Chapin, M.D.; Department for males: Assistant Physician, Edward N. Brush, M.D.; Second Assistant Physician, W. H. Harrison, M.D; Department for Females: Assistant Physician, H. B. Nunemaker, M.D.; Second Assistant Physician, E. E. Josselyn, M.D.; Consulting Gynecologist, A. Victoria Scott, M.D. Remarks: Hospital has two ambulances, and emergency ward; percentage of mortality, 6.63.

PHILADELPHIA LYING-IN CHARITY.

Location: Eleventh and Cherry streets. Age: Sixty-three years. Number of beds, 37. Patients received: Diseases of women, and obstetrical cases. Terms per week: $6 to $20 (also, free). Actual cost per week per patient: $2.25 (about). No special visiting hours. Resident physicians: Male, none; female, 1; how appointed, by examination; term of service, one year; pay, none. Nurses: Male, none; female, 32; pay, $5 per month; term of service, one year; training school, yes; kind of nursing taught, general as well as special; diploma or certificate awarded, yes. No special facilities for massage, electricity, or hydrotherapy. Clinics: Only surgical and maternity cases taken (see "Dispensary"). Instruction for students (see announcement of hospital). Maternity cases: At what time received, two weeks before labor (pay patients any time); terms, as stated. Dispensary work: Charge, free; departments, surgical and diseases of women, daily, 1 P. M.; average number of patients, 124 per month. Names of physicians of hospital.—Medical Staff: Consulting Obstetricians, Drs. Theophilus Parvin, William H. Parish, Barton Cooke Hirst; Consulting Surgeons, Drs. D. Hayes Agnew, John B. Roberts, William W. Keen; Visiting Physicians, Drs. Oliver Hopkinson, Jr., William Reynolds Wilson, George M. Boyd; Assistant Physicians, Drs. H. B. Martin, Frank L. Southrn, J. Neely Rhoads, B. F. Hawley, W. W. Bulette, T. M. Tyson; Pathologist, W. F. Haehnlen, M.D. Remarks: Two hundred and thirteen deliveries in out-door service last year; hospital has an annex of sixteen beds.

PHILADELPHIA POLYCLINIC, AND COLLEGE FOR GRADUATES IN MEDICINE.

Location: Lombard street, between Eighteenth and Nineteenth streets. Age: eight years. Number of beds, 50. Patients received: Acute, chronic, and venereal cases, adults and children. Patients not received: Contagious cases, alcoholism. Terms per week: $7 to $10 and $25. Actual cost per week per patient: $8.40. Number of free beds: 6. Visiting hours: 2 to 3 P. M. (except Sunday; for rooms, after 12 M.). Resident physicians: Male, 1; female, none; how appointed, by examination; term of service, one year; pay, none. Nurses: Male, none; female, 7; pay, none; term of service, one year; training school, yes; kind of nursing taught, general; diploma or certificate awarded, yes. Facilities for massage, all departments; electricity, all departments, all appliances; hydrotherapy, no special. Clinics: Kind, in all departments; days, every day; hours, 10 A. M. to 5 P. M.; duration of clinics, all year. Instruction for students: Clinics, as stated; ward classes, hospital attached to college; terms (see announcement). Maternity cases: At what time taken, any time; terms, no special. Dispensary work: Charge, for medicine and material; departments (the hours for treatment of walking cases are as follows): Diseases of children and obstetrics, 10 A. M.; Surgical diseases, 11 A. M.; diseases of the skin, 11.30 A. M.; medical diseases, 12 M.; diseases of the ear and of women, 1 P. M.; diseases of the throat and nose, and orthopedic diseases (deformities), 2 P. M.; diseases of the nerves and chest, 3 P. M.; diseases of the eye, and venereal diseases, 4 P. M.; medical and surgical diseases, 5 P. M.; aver-

age number of patients, 1,596 per month. Names of physicians of hospital.—Faculty: R. J. Levis, M.D., Surgery; J. Solis-Cohen, M.D., Diseases of the Throat; Charles H. Burnett, M.D., Diseases of the Ear; C. B. Nancrede, M.D., Surgery; John B. Roberts, M.D., Surgery; Charles K. Mills, M.D., Diseases of the Mind and Nervous System; Henry Leffmann, M.D., Chemistry and Hygiene; Arthur Van Harlingen, M.D., Diseases of the Skin; George C. Harlan, M.D., Diseases of the Eye; J. Henry C. Simes, M.D., Genito-Urinary and Venereal Diseases; B. F. Baer, M.D., Gynecology; Lewis W. Steinbach, M.D., Surgery; Thomas J. Mays, M.D., Diseases of the Chest; Alexander W. MacCoy, M.D., Diseases of the Throat and Nose; H. Augustus Wilson, M.D., Surgery; Edward Jackson, M.D., Diseases of the Eye; Solomon Solis-Cohen, M.D., Clinical Medicine and Therapeutics; S. Weir Mitchell, M.D., LL.D., Diseases of the Mind and Nervous System: B. Alexander Randall, M.D., Diseases of the Ear; Edward P. Davis, M.D., Obstetrics and Diseases of Children; Thomas S. K. Morton, M.D., Surgery; Thomas J. Mays, M.D., Experimental Therapeutics; A. B. Hirsh, M.D., Adjunct Professor of General and Orthopædic Surgery; A. W. Watson, M.D., Diseases of the Throat and Nose; Ralph W. Seiss, M.D., Otology; C. L. Bower, M.D., Surgery; J. Abbott Cantrell, M.D., Diseases of the Skin; M. Imogene Bassette, M.D., Electro-Therapeutics; Ross R. Bunting, M.D., Electro-Therapeutics; K. W. Ostrom, M.D., Massage and Swedish Movements; T. B. Schneideman, M.D., Refraction and Ophthalmoscopy; J. C. Heisler, M.D., Diseases of the Chest. Clinical Assistants: Applied Anatomy and Operative Surgery, Drs. Max J. Stern, John B. Turner, C. B. Williams; Diseases of the Mind and Nervous System, Drs. M. Imogene Bassette, Robert Coyle, Ross R. Bunting, J. Wm. McConnell; Diseases of the Eye, Drs. McCluney Radcliffe, P. N. K. Schwenk, Theo. B. Schneideman, R. J. Phillips, Walter J. Freeman, A. B. Frazee; Gynecology, J. S. Baer, M.D., Chief of Dispensary, H. C. Bloom, M.D., Chief of Clinic; Diseases of the Chest, John B. Turner, M.D., Chief of Clinic; Diseases of the Throat and Nose, Chas. A. Currie, M.D., Chief of Clinic, Drs. Thos. H. Helsby, Wm. E. Parke; Orthopædic Surgery, Drs. H. C. Bloom, C. B. Williams, Mr. A. Gustaf Gefvert, Mechanician, Mr. K. W. Ostrom, Massage and Swedish Movements; Clinical Medicine and Applied Therapeutics, James Robinson, M.D., Chief of Clinic, W. B. Diefenderfer, M.D., Registrar, M. Jeanette Scott, M.D., Microscopist; Diseases of the Ear, Drs. Wm. S. Shimer, Ellwood Matlrck, P. N. Eckman; Obstetrics and Diseases of Children, Drs. Frances E. Janney, M. B. McCollin. Remarks: Visiting Nurses' Society in connection with Obstatrical Department; hospital was built to combine in one institution the advantages of special hospitals.

ST. CHRISTOPHER'S HOSPITAL FOR CHILDREN.

Location: Lawrence and Huntingdon streets. Age: Fifteen years. Number of beds, 50; wards, 6. Patients received: Acute and chronic cases, children only. Patients not received: Contagious and venereal cases, alcoholism. Terms per week: $2. Actual cost per week per patient: $2. Number of free beds: 5. Visiting hours: Thursday, 2 to 4 P. M. No resident physicians. Nurses: Male, none; female, 4; pay, $3.50 per week. No facilities for massage, electricity, and hydrotherapy. No clinics. No instruction for students. Names of physicians of hospital.—Drs. W. H. Burnett, D. D. Stewart.

ST. CLEMENT'S HOSPITAL AND DISPENSARY.

Location: Cherry street, between Twentieth and Twenty-first street. Age: Five years. Number of beds, 24. Patients received: Acute and chronic cases, adults and children, any religion. Patients not received: Contagious and venereal cases, alcoholism. Terms per week: $7 (if able to pay). Visiting hours: Daily, 2 to 3 P. M. Resident physician: Male, 1; how appointed, by examination; term of service, one year; pay, none. Nurses: Male, 1; female, 2; nursing done by All Saints' Sisters. No special facilities for massage, electricity, or hydrotherapy. Clinics (see "Dispensary"). No instruction for students. Maternity cases not taken (cared for at home). Dispensary work: Charge, 10 cents per prescription (if able to pay); departments, medical and surgical, daily—nose, throat, and ear, Monday and Thursday—gynecological, daily, 10 A. M. to 4.30 P. M., and 7 to 8 P. M. Average number of patients, 1,378 per month; average number of prescriptions, 1,327 per month. Names of physicians of hospital.—Physicians: Drs. D. B. Birney, T. A. Packard, Walker Chrystie, Judson Daland; Surgeons: Drs. Green, Bower, Shoemaker.

ST. MARY'S HOSPITAL.

Location: Frankford road and Palmer street. Age: Twenty-eight years. Number of beds, 100. Patients received: Acute cases, alcoholism (extra fees), adults and children. Patients not received: Chronic (a few exceptions), contagious, and venereal cases. Terms per week: Wards, $4 to $5; rooms, $10; alcoholics, $15. Visiting hours: Thursday and Sunday, 2 to 5 P. M. Resident physicians: Male, 3; female, none; how appointed, by examination; term of service, one year; pay, none. Nursing done by the Sisters of St. Francis. No special facilities for massage, electricity, or hydrotherapy. Clinics (see "Dispensary"). No instruction for students. Maternity cases not taken. Dispensary work: Charge, free; departments: Eye and ear, Tuesday, Thursday, and Saturday, 3 P. M.—throat, nose, and ear, Tuesday, Thursday, and Saturday, 1 to 2 P. M.—surgical, Monday and Thursday, 10 A. M. to 12 M.—medical, Thursday and Friday, 10 A. M. to 12 M.—diseases of women and children, Monday, Wednesday and Friday, 1 to 2 P. M.: average number of patients, 2,200 per month (visits). Names of physicians of hospital.—Physicians: Drs. J. J. Moylan, D. D. Stewart; Surgeons: Drs. J. P. Stritmattur, J. B. Deaver, Richard Harte; Diseases of Women: Chas. H. Willitts, M.D.; Eye: L. F. Love, M.D.; Eye and Ear: W. J. Shimer, M.D. Remarks: Hospital has ambulance service.

ST. JOSEPH'S HOSPITAL.

Location: Sixteenth street and Girard avenue. Age: Forty-three years. Number of beds, 140; wards, 6. Patients received: Acute and venereal cases, alcoholism (extra for liquor), adults and children. Patients not received: Chronic and contagious cases. Terms per week: $5 to $15 ($25 for rooms). Visiting hours: Daily (except Sunday), 2 to 4 P. M. Resident physicians: Male, 2; female, none; how appointed, by examination; term of service, one year; pay, none. Nursing done by the Sisters of Charity of St. Vincent de Paul. No special facilities for massage, electricity, or hydrotherapy. Clinics (only private held; see "Dispensary"). No instruction for students. Maternity cases not taken. Dispensary work: Charge, free; departments, eye, Monday and Friday, 2 P. M.—medical and surgical, Tuesday, Thursday, and Saturday, 12.30 P. M.—diseases of women and chil-

dren, Tuesday and Friday, 1 P. M.—throat, nose and ear, Monday, Tuesday, Thursday, and Saturday, 11 A. M.; average number of patients, 157 per month (new cases). Names of physicians of hospital.—Attending Physicians: Drs. Henry Morris, John J. Alexander, George Morley Marshall, M. T. Prendergast; Attending Surgeons: Drs. Robert B. Cruice, George McClellan, John H. Packard, Joseph Otto; Attending Gynecologist: John M. Keating, M.D.; Obstetrician: A. G. Bournonville, M.D.; Pathologist: Prof. Joseph Leidy, M.D., LL.D.; Consulting Physicians: Drs. William V. Keating, George R. Morehouse; Consulting Surgeons: Drs. John H. Brinton, Charles S. Boker; Consulting Physicians on Nervous Diseases: Drs. Chas. K. Mills, Hugo Engel; Resident Physicians: Drs. Joseph M. Spellissy, John W. Shaw. Out-patient Department.—Ophthalmic Surgeon: S. Lewis Ziegler, M.D.; Laryngological Surgeon: George Morley Marshall, M.D.; Surgeon: Ernest Laplace, M.D.; Gynecologist: Herman B. Allyn, M.D.; Physician: James T. Prendergast, M.D.; Physician and Surgeon in Charge: Robert B. Cruice. Remarks: Hospital has ambulance service, and all modern conveniences; cases of alcoholism, $15 per week; extra for liquor.

UNIVERSITY HOSPITAL.

Location: Thirty-fourth and Spruce streets. Age: Sixteen years. Number of beds, 200. Patients received: Acute cases, venereal cases (not as free patients), alcoholism (not as free patients), adults and children. Patients not received: Chronic cases (not usually), contagious cases. Terms per week: $7 in wards, $14 to $25 in rooms. Visiting hours: Wards, daily 3 to 4 P. M.; rooms, Sunday, 2 to 3 P. M. Resident physicians: Male, 6; female, none; how appointed, by competitive examination; term of service, fifteen months; pay, none. Nurses: Male, none; female, 40; pay, $10 to $14 per month; term of service, two years; training school, yes; kind of nursing taught, general and special; diploma or certificate awarded, yes. Facilities for massage, ordinary; electricity, special; hydrotherapy, ordinary. Clinics (see University roster). Instruction for students: Clinics, yes; ward classes, daily, 1 to 2 P. M.; terms, free (to University students only). Maternity cases: At what time taken, two weeks before labor; terms, pay if able, if not, free. Dispensary work: Charge, for medicine; departments, medical, surgical, nervous and skin diseases, etc., daily, 12 M.—ear, throat, nose, gynecological, and eye, Tuesday, Thursday, and Saturday, 2 to 4 P. M.; average number of patients, 513 per month (new cases); average number of prescriptions, 1,382 per month. Names of physicians of hospital.—Medical Staff: Drs. D. Hayes Agnew, LL.D., William Pepper, LL.D., William Goodell, James Tyson, John Ashhurst, Jr., William F. Norris, Horatio C. Wood, Louis A. Duhring, Barton Cooke Hirst, J. William White, John Guiteras, De Forest Willard, Hobart A. Hare, B. Alexander Randall; Anæsthetizer: David B. Birney, M.D.; Curator: Judson Daland, M.D.; Assistants: Drs. H. R. Wharton, R. H. Harte, R. G. Curtin, J. P. Crozer Griffith, J. K. Mitchell, Judson Daland, Henry W. Stelwagon, F. X. Dercum, Wm. L. Taylor, Wm. Constantine Goodell. Dispensary Staff.—Medical: Chief, W. Howard Fussell, M.D.; Attending Physicians, Drs. S. W. Morton, A. C. Wood, T. Mellor Tyson, J. Howe Adams. Diseases of the Throat: Chief, Carl Seiler, M.D.; Assistants, Drs. J. Howard Reeves, N. A. Cashman, Chas. P. Grayson. Diseases of Children: Chief, Allen J. Smith, M.D.; Attending Physicians, Drs. Thos. Westcott, H. B. Carpenter. Surgical: Attending Surgeons, Drs. Edward Martin, Geo. E. Shoemaker, Edmund W. Holmes, John B. Shober. Venereal: Chief, Thomas R. Neilson, M.D.; Assistants, Drs. H. M. Christian, Francis Rudderow. Orthopædic: Attending Surgeons, Drs. James K. Young, F. H. Milliken; Assistant, H. W. Cattell, M.D. Gynecological: Chief, Wm. L. Taylor, M.D.; Assistants, Drs. W. A. Carey, F. N. Yeager. Nervous Diseases: Chief, F. X. Dercum, M.D.; Assistants, Drs. Charles S. Potts, Wm. Evans. Eye: Chief, James Wallace, M.D.; Assistants: Drs. G. E. De Schweinitz, W. B. Jamison, D. M. Easter. Ear: Chief, J. M. Brown, M.D.; Assistant, L. J. Hammond, M.D. Skin: Chief, Henry W. Stelwagon, M.D.; Assistant, M. B. Hartzell, M.D. Remarks: Twenty-four endowed beds; patients admitted at 12 M., accident cases any time; hospital has ambulance service, isolation ward, and maternity pavilion.

WILL'S EYE HOSPITAL.

Location: Eighteenth and Race street (South Logan Square). Age: Fifty-seven years. Number of beds, 60 (will accommodate 100); wards, 4. Patients received: Eye cases only. Patients not received: Ophthalmia cases. Terms per week: Free. Actual cost per week per patient: $5.57. Number of free beds: 60. Visiting hours: Daily (except Sunday), 10.30 to 11.30 A. M. Resident physician: Male, 1; how appointed, elected by City Trusts; term of service, six months (usually serve two terms or more); pay, none. Nurses: Male, 1; female, 2; term of service, indefinite; kind of nursing taught, not regularly; diploma or certificate awarded, no. Facilities for massage, no; electricity, yes; hydrotherapy, no. Clinics: Kind, eye; number, 5 daily; hours, 2 to 3 P. M. (except Sunday). Instruction for students: Clinics, yes; terms, free. Dispensary work: Charge, free; department, eye, 2 P. M.; average number of patients, 11,103 (last year). Names of physicians of hospital.—Emeritus Surgeons: Drs. T. G. Morton, W. Thomson, Geo. Strawbridge; Attending Surgeons: Drs. Frank Fisher, H. E. Goodman, A. D. Hall, G. C. Harlan, Edward Jackson, P. D. Keyser, W. W. McClure, W. F. Norris, Chas. A. Oliver, Samuel D. Risley; Assistants: Drs. S. Lewis Ziegler, Geo. T. Lewis, P. N. K. Schwenk, Theo. B. Schneideman, Conrad Berens, C. T. Seltzer, W. Zentmayer, Thompson S. Westcott, G. Oram Ring; Pathological Curator: W. F. Norris, M.D.; House Surgeon: M. W. Zimmerman, M.D. Remarks: Ordinary cases admitted from 2 to 3 P. M., accident, any time; hospital has 5 memorial beds, 15 endowed beds.

WOMEN'S HOMŒOPATHIC ASSOCIATION, OF PENNSYLVANIA.

Location: Twentieth street and Susquehanna avenue. Age: Nine years. Number of beds, 61; 18 private rooms, 5 rooms for two patients, 8 rooms for four patients. Patients received: Acute cases, chronic cases (with acute symptoms), adults and children. Patients not received: Contagious and venereal cases, alcoholism. Terms per week: $3 to $25 (laundry work extra). Actual cost per week per patient: $6. Number of free beds: 6 memorial (non-paying patients also taken). Visiting hours: any time. Resident physicians: Male, none; female, 3 (2 interne); how appointed, by election; term of service, one year for resident, six months for interne; pay, $25 per month. Nurses: Male, none; female,

10; pay, one year, $5 per month, two years, $4 per month; term of service, two years; training school, yes; kind of nursing taught, general and special; diploma or certificate awarded, yes. Facilities for massage, yes; electricity and hydrotherapy, none. Clinics: Medical, every day; surgical, eye, and ear, Monday, Thursday, and Saturday, 12 M. to 2 P. M.; gynecological, Thursday and Friday, 12 M. to 2 P. M. No instruction for students. Maternity cases: At what time taken, one to two weeks before labor; terms, $3 to $15 per week (also, charity cases). Dispensary work (see "Clinics"). Names of physicians of hospital.—Consulting Physicians and Surgeons: Drs. Chas. G. Raue, Edward Fornias, Malcolm Macfarlan, Walter M. James. Attending Board: Medical Department, Drs. Gustavus E. Gramm, J. Sperry Thomas, R. Straube, A.M.; Gynecological Department, Drs. Wm. F. Berkenstock, E. Newton Harpel, Emma T. Schreiner; Surgical Department, Drs. E. Newton Harpel, Duncan Macfarlan; Obstetrical Department, Drs. Jesse W. Thatcher, Eliza J. Remick, Anna E. Dumont; Dispensary Department, Eye and General Surgery, E. Newton Harpel, M.D.; Diseases of Women, Drs. W. F. Berkenstock, Flora E. Wasserman, Mary A. Cooke; General Dispensary, Drs. Gustavus E. Gramm, Urania Tyrrel, A. S. Geddes, Mary A. Cooke, Flora E. Wasserman, H. M. Sanborn; Dental Department, Alex. P. Long, D.D.S., Alice A. Graham, D.D.S. Special Staff: P. P. Wells, M.D., Brooklyn, N. Y.; W. P. Wesselhoeft, M.D., Boston, Mass.; Edward Rushmore, M.D., Plainfield, N. J.; Alice B. Campbell, M.D., Brooklyn, N. Y.; Phœbe D. Brown, M.D., Hilton, N. J.; Mary H. Baldwin, M.D., New York City; J. R. Earhart, M.D., Philadelphia, Pa.; Euphemia J. M. Sturtevant, M.D., New York City; Edmund Carleton, M.D., New York City; John V. Allen, M.D., Frankford, Pa. Remarks: Patients admitted Wednesday, 11 A. M. to 2 P. M.; emergency cases any time.

WEST PHILADELPHIA HOSPITAL FOR WOMEN.

Location: Forty-first and Parrish streets. Age: Two years. Number of beds, 20. Patients received: Acute cases, chronic cases (with acute symptoms), adults only. Patients not received: Contagious and venereal cases, alcoholism. Terms per week: $5 to $7; rooms, $10, $15, and $25. Visiting hours: Tuesday and Friday, 2 to 4 P. M. Resident physicians: Male, none; female, 1 (2 interne); term of service, one year; pay, none. Nurses: Male, none; female, 6; pay, $10 per month; term of service, two years; training school, yes; kind of nursing taught, special; diploma or certificate awarded, yes. No special facilities for massage, electricity, or hydrotherapy. No instruction for students. Maternity cases: At what time taken, two weeks before labor; terms, as arranged. Dispensary work: Charge, 25 cents each prescription; departments, daily, 10.30 A. M. to 12 M., and 6 to 7 P. M.; average number of patients, 350 per month (visits); average number of prescriptions, 500 per month. Names of physicians of hospital.—Attending: Drs. Elizabeth H. Comly Howell, Ida E. Richardson, Elizabeth L. Peck; Ophthalmologist: Amy S. Barton, M.D.; Pathologist: Marie K. Formad, M.D.; Consulting: Drs. Anna E. Brommal, James B. Walker, Hannah Croasdale, W. W. Keen, John H. Musser, John B. Roberts; Clinicians: Drs. Elizabeth H. Comly Howell, Elizabeth L. Peck, Anna P. Sharpless, A. Helena Goodwin. Remarks: Chronic cases kept only six weeks; hospital for diseases of women and children.

WOMEN'S HOSPITAL, PHILADELPHIA.

Location: Twenty-second street and North College avenue. Age: Thirty years. Number of beds, 65 to 70. Patients received: Acute cases, adults (one ward for children). Patients not received: Chronic, contagious, and venereal cases, alcoholism. Terms per week: $3 (for wards). Actual cost per week per patient: $8 to $9. Number of free beds, 25 (about). Visiting hours: Daily (except Sunday), 3 to 4 P. M. Resident physicians: Male, none; female, 1 (6 assistants); how appointed, by examination; term of service, one year; pay, none. Nurses: Male, none; female, 50; pay, $10 per month; term of service, two years; training school, yes; kind of nursing taught, general and special; diploma or certificate awarded, yes. No special facilities for massage, electricity, or hydrotherapy. Clinics: Daily (see college announcement). Instruction for students: Clinics, 10 weekly; ward classes, daily (only students of college admitted). Maternity cases: At what time taken, two weeks before labor; terms, free (ward, $3, private patients, $5 to $30). Dispensary work: Departments, medical, surgical, gynecological, orthopædic, nervous, skin, eye, ear, nose and throat, dental, daily, 8 to 9.30 A. M.; average number of patients, 593 per month. Remarks: The term of the physician in charge is not limited.

LADIES' UNITED AID SOCIETY OF THE METHODIST EPISCOPAL CHURCH IN THE CITY OF PHILADELPHIA.

Location: Lehigh avenue and Thirteenth street. Age: Twenty-six years. Applicants who have been members of the Methodist Episcopal Church ten years prior to application, five of which years they shall have been members of a Methodist Episcopal church in Philadelphia, and the payment of $200 admission fee. No endowed beds. Visitors admitted every day. Physicians: Drs. Wm. H. Senderling, A. Rusling Rainear, G. Maxwell Christine, Chas. Fulmer, W. W. Lamb.

Army, Navy & Marine Hospital Service.

Changes in the Medical Corps of the U. S. Navy for the week ending October 31, 1891.

HARVEY, HENRY P., Surgeon. Ordered to Receiving Ship "St. Louis."

FLINT, JAMES M., Surgeon. Detached from Smithsonian Institution, and to the U. S. S. "Miantonomah."

HEYL, T. C., Surgeon. Detached from Receiving Ship "St. Louis," and wait orders.

Notes and Items.

A CYCLONE is like three school girls walking abreast—it doesn't turn out for anything.—*Texas Siftings.*

THERE is a good deal of public praying done that doesn't mean anything in heaven or on earth.—*Ram's Horn.*

A GOOD liar is better company than a truthful man with an impediment in his speech.—*Drake's Magazine.*

THE time comes when some men leave father and mother and cleave unto their uncle.—*Binghampton Leader.*

THE week ought to be short for the servant girl, considering the number of days she takes out.—*Elmira Gazette.*

READING maketh a full man—that is, it fills his mind with words that he does not know how to pronounce.—*Indianapolis Journal.*

CLERK: "A deaf man to-day got a seventy-five-cent prescription; I couldn't make him hear, and he only paid five cents."
Druggist: "What did you do about it?"
Clerk: "Charged $1.45 for the next prescription."

EUROPHEN.

EUROPHEN is the most interesting of the new Iodine compounds, for it not only acts as a perfect substitute for Iodoform, but seems likely to largely displace Mercury and Iodine in the internal treatment of Constitutional Syphilis. This at least is the opinion of Seifert, Eichhoff and Petersen, who used it hypodermically in this condition, with surprisingly good results. The same writers found also, that **EUROPHEN** possesses remarkable curative power in Obstinate Dermatoses, in Atrophic and Secretory Rhinitis, in Ulcerative Conditions, in Inflammations of the Mucous Surfaces, etc.

EUROPHEN is prepared only by the Farbenfabriken, formerly Friedr. Bayer & Co., of Elberfeld, and is supplied in ounces.

PHENACETINE-BAYER.

The safest of antithermics, and the most prompt and effective in action, **PHENACETINE-BAYER** continues to hold its high position as an Antipyretic, Analgesic, Anti-rheumatic and Anti-neuralgic. In all Acute Inflammatory Fevers, Bronchitis, Phthisis, Rheumatism, Influenza, Migraine, Whooping-cough, etc., it has given most satisfactory results.

PHENACETINE-BAYER, prepared solely by the Farbenfabriken, formerly Friedr. Bayer & Co., of Elberfeld, is supplied by us in ounces.

We prepare pills and tablets of **PHENACETINE-BAYER** containing 2, 3, 4 and 5 grains each, also pills in combination with Salol or Caffeine.

SULFONAL-BAYER.

SULFONAL-BAYER is justly regarded as a true nerve sedative, as well as a hypnotic, on account of its prolonged good effect. It is of the highest value in the Insomnia of Nervous and Febrile conditions, in the Symptomatic Treatment of Insanity, and all cases in which Hypnotics are indicated. To obtain its best effects, **SULFONAL** must be administered in a manner suited to its nature.

SULFONAL-BAYER is prepared solely by the Farbenfabriken, formerly Friedr. Bayer & Co., of Elberfeld, and is supplied by us in ounces; also in form of tablets and pills.

ARISTOL.

ARISTOL, as a succedaneum of Iodoform, has met with remarkable success. It is safe and effective in all Ulcerations, in Skin Diseases, in Lesions of the Eye, Ear, Nose, Mouth and other cavities, in Dysentery, Gonorrhœa, Ivy-poisoning, Burns, Scalds, Blisters, and all external Traumatisms. It is used in ointments, powders, crayons, suppositories, balls, oils, sprays, collodions, plasters, tampons, bandages, etc.

ARISTOL GAUZE is now widely used by American Surgeons in place of Iodoform, so long offensive to both Physician and patient.

ARISTOL, prepared only by the Farbenfabriken, formerly Friedr. Bayer & Co., of Elberfeld, is supplied by us in ounces.

New descriptive pamphlets on the above preparations mailed to applicants.

W. H. Schieffelin & Co.,

NEW YORK.